												FO	RM 3	
					S1 DEPARTMENT	TATE OI	-	OURCES			AMENI	DED REPOR		
					DIVISION C						AWILINE	DED NEI OI	·' <b>L</b>	
		AP	PLICATION FO	R PERM	IT TO DRILL					1. WELL NAME and NU UTE		13-9-4-3-2	WH	
2. TYPE OF	WORK	DRILL NEW WELL	REENTER	P&A WELL	DEEPEN	WELL	)			3. FIELD OR WILDCAT	r WILD	CAT		
4. TYPE OF	WELL	Oi	l Well Coa	alhed Meth	ane Well: NO					5. UNIT or COMMUNIT	<b>FIZATION</b>	AGREEM	ENT NAM	1E
6. NAME O	F OPERATOR		NEWFIELD PROI							7. OPERATOR PHONE	435 640	3-4825		
8. ADDRES	S OF OPERATO	R	Rt 3 Box 3630		9. OPERATOR E-MAIL									
	AL LEASE NUME , INDIAN, OR ST		111 0 201 0000	11. MII	NERAL OWNERS		07175	) ess(		12. SURFACE OWNER	SHIP		_	/8\
13. NAME		420H626269 WNER (if box 12 =			DERAL INDIAN STATE FEE FEDERAL INDIAN STATE FEE   14. SURFACE OWNER PHONE (if box 12 = 'fee')									EE ( <b>(</b> ())
15. ADDRE	SS OF SURFAC	M CE OWNER (if box	urray Sheep Rand							16. SURFACE OWNER	435-823		= 'fee')	
47 INDIAN	ALL OTTER OF	TDIDE NAME	P.O. Box 96,		84052	IINGLE P	RODUCTION	I FROM		19. SLANT				
	ALLOTTEE OR = 'INDIAN')	TRIBE NAME			PLE FORMATIO	NS	ling Application			VERTICAL DIF	RECTIONA	AL D	IORIZONT	ΓAL 📵
20. LOCA	TION OF WELL			FOOTAGE	s	QT	R-QTR	SECT	ION	TOWNSHIP	R/	NGE	МЕ	ERIDIAN
LOCATIO	N AT SURFACE		276	FNL 1452	2 FWL	NI	ENW	16		3.0 S	2.	0 W		U
Top of Up	permost Produ	ıcing Zone	330	FSL 660	FWL	SI	wsw	9		3.0 S	2.	0 W		U
At Total	Depth		330	FNL 660	FWL	NV	WNW\	4		3.0 S	2.0 W U			
21. COUN		DUCHESNE		22. DIS	STANCE TO NEA	REST LE 27		eet)		23. NUMBER OF ACRE	ES IN DRI 4		IT	
					STANCE TO NEA ed For Drilling		leted)	POOL		26. PROPOSED DEPTI		TVD: 93	36	
27. ELEVA	TION - GROUNI	) LEVEL		28. BC	ND NUMBER					29. SOURCE OF DRIL			PPLICAB	LE
		5256			Hole, Casing	WYB00		rmation			4374	478		
String	Hole Size	Casing Size	Length	Weight			Max Mu			Cement		Sacks	Yield	Weight
COND	24	20	0 - 60	37.0	H-40 S	T&C	0.0 Class G			57	1.17	15.8		
SURF	17.5	13.375	0 - 1500	54.5	J-55 S	T&C	8	.4		Class G		120	3.33	11.0
										Class G		420	1.9	13.0
I1	12.25	9.675	0 - 8482	40.0	N-80 Bu	uttress	10	0.0	Prer	nium Lite High Stre	ngth	671	3.53	11.0
PROD	8.75	5.5	0 - 18663	20.0	P-110 (	Other	14	1.0		50/50 Poz No Used		532	0.0	0.0
					A	TTACH	MENTS	<u> </u>				<u> </u>		
	VER	FY THE FOLLO	WING ARE ATT	ACHEDI	N ACCORDAN	ICE WIT	TH THE UTA	AH OIL AN	ID GAS	CONSERVATION G	ENERAI	L RULES		
<b>₩</b>	ELL PLAT OR MA	AP PREPARED BY L	ICENSED SURVE	YOR OR E	NGINEER		COM	PLETE DRII	LLING PL	AN				
<b>I</b> AFF	FIDAVIT OF STA	OWNER AGREEM		FORM	1 5. IF OPER	RATOR IS	OTHER THAN THE LE	EASE OW	NER					
<b>I</b> ✓ DIR	ECTIONAL SUR	VEY PLAN (IF DIR	ECTIONALLY OR	HORIZON	TALLY DRILLED	))	торо	GRAPHICA	L MAP					
NAME Do	n Hamilton				TITLE Permitti	ing Agent	t			PHONE 435 719-20	018			
							113 EMAIL starpoint@etv.net							
SIGNATU	RE				<b>DATE</b> 03/06/2	2013				EMAIL starpoint@e	tv.net			
API NUME	RE ASSIGNED	000			DATE 03/06/2	2013			E	EMAIL starpoint@e	tv.net			

## Newfield Production Company 13-9-4-3-2WH

Surface Hole Location: 276' FNL, 1452' FWL, Section 16, T3S, R2W Bottom Hole Location: 330' FNL, 660' FWL, Section 4, T3S, R2W Duchesne County, UT

# **Drilling Program**

#### 1. Formation Tops

Uinta surface
Green River 3,637'
Garden Gulch member 6,575'
Uteland Butte member 8,764'

Lateral TD 9,368' TVD / 18,663' MD

## 2. Depth to Oil, Gas, Water, or Minerals

Base of moderately saline 996' (water)
Green River 6,575' - 8,764' (oil)
Uteland Butte member 8,764' - 9,368' (oil)

#### 3. Pressure Control

Section BOP Description

Surface 12-1/4" Diverter

Intermediate The BOP and related equipment shall meet the minimum requirements of Onshore

Oil and Gas Order No. 2 for equipment and testing requirements, procedures, etc for

a 5M system.

Prod/Prod Liner The BOP and related equipment shall meet the minimum requirements of Onshore

Oil and Gas Order No. 2 for equipment and testing requirements, procedures, etc for

a 5M system.

A 5M BOP system will consist of 2 ram preventers (double or two singles) and an annular preventer (see attached diagram). A choke manifold rated to at least 5,000

psi will be used

#### 4. Casing

	I	nterval	Weight			Pore Press	MW @	Frac	Safety Factors			
Description	Тор	Bottom (TVD/MD)	(ppf)	Grade	Coup	@ Shoe	Shoe	Grad @ Shoe	Burst	Collapse	Tension	
Conductor	0'	60'			Weld							
20	U	60			weid							
Surface	01	1.5001	54.5	J-55	STC	0.22	0.4	1.4	2,730	1,130	514,000	
13 3/8	0'	1,500'	54.5	J-33	SIC	8.33	8.4	14	2.68	2.24	6.29	
Intermediate	01	8,410'	40	N 00	DTC	10	10.5	1.5	5,750	3,090	916,000	
9 5/8	0'	8,482'	40	N-80	BTC	10	10.5	15	1.09	1.35	2.72	
Production	01	9,368'	20	D 110	DEC	1.4	14.5	1.6	12,360	11,080	641,000	
5 1/2	0'	18,663'	20	P-110	BTC	14	14.5	16	2.10	1.81	1.72	

#### Assumptions:

Surface casing MASP = (frac gradient + 1.0 ppg) - (gas gradient)

Intermediate casing MASP = (reservoir pressure) - (gas gradient)

Production casing MASP = (reservoir pressure) - (gas gradient)

Intermediate collapse calculations assume 50% evacuated

Maximum intermediate csg collapse load assumes loss of mud to a fluid level of

4.205'

Intermediate csg run from surface to

8,410' and will not experience full evacuation

Production csg run from surface to TD will isolate intermediate csg from production loads

Production csg withstands burst and collapse loads for anticipated production conditions

Surface & production collapse calcs assume fully evacuated casing w/a gas gradient

All tension calculations assume air weight of casing

Gas gradient = 0.1 psi/ft

All casing shall be new.

All casing strings shall have a minimum of 1 centralizer on each of the bottom 3 joints.

#### 5. Cement

Job	Hole Size	Fill	Slurry Description	ft <sup>3</sup>	OH excess	Weight (ppg)	Yield (ft³/sk)
Conductor	24	60'	Class G w/ 2% KCl + 0.25 lbs/sk Cello Flake	66 <b>5</b> 7	15%	15.8	1.17
Surface Lead	17 1/2	500'	Varicem (Type III) + .125 lbs/sk Cello Flakes	399 120	15%	11.0	3.33
Surface Tail	17 1/2	1,000'	Varicem (Type III) + .125 lbs/sk Cello Flakes	799 420	15%	13.0	1.9
Intermediate Lead	12 1/4	6,575'	HLC Premium - 35% Poz/65% Glass G + 10% bentonite	2368 671	15%	11.0	3.53
Intermediate Tail	12 1/4	1,907'	50/50 Poz/Class G + 1% bentonite	687 532	15%	14.0	1.29
 	-	<i>)</i> -					

The surface casing will be cemented to surface. In the event that cement does not reach surface during the primary cement job, a remedial job will be performed.

Actual cement volumes for the intermediate casing string will be calculated from an open hole caliper log, plus 15% excess.

The 5.5" production string will be left uncemented and run from surface to TD. Individual frac stages will be isolated with open hole packers.

This well will not be perforated or produced outside the legal setbacks

#### 6. Type and Characteristics of Proposed Circulating Medium

#### **Interval** Description

Surface - 1,500'

An air and/or fresh water system will be utilized. If an air rig is used, the blooie line discharge may be less than 100' from the wellbore in order to minimize location size. The blooie line is not equipped with an automatic igniter. The air compressor may be located less than 100' from the well bore due to the low possibility of combustion with the air/dust mixture. Water will be on location to be used as kill fluid, if necessary.

RECEIVED: August 06, 2013

1,500' - 8,482'

A water based mud system will be utilized. Hole stability may be improved with additions of KCl or a similar inhibitive substance. In order to control formation pressure the system will be weighted with additions of bentonite, and if conditions warrant, with barite.

Anticipated maximum mud weight is

10.5 ppg.

8,482' - TD One of two possible mud systems may be used depending on offset well

performance on ongoing wells:

A water based mud: Hole stability may be improved with additions of KCl or a similar inhibitive substance. In order to control formation pressure the system will be weighted with additions of bentonite, and if conditions warrant, with barite.

-or-

A diesel based OBM system: with an oil to water ratio between 70/30 and 80/20. Emulsifiers and wetting agents will be used to maintain adequate mud properties. A water phase salinity will be maintained in the range of 25% using CaCl (Calcium Chloride). All cuttings will be dried and centrifuged so that they can be easily transferred to a lined cuttings pit with little to no free fluid on them. The cuttings will be mixed with fly ash prior to transportation to a location on Newfield owned surface. Once on Newfield owned surface, the cuttings will be treated with the previously approved FIRMUS process and used as a construction material on future location and/or roads on Newfield owned surface. The cuttings may also be transported to a state approved disposal facility.

Anticipated maximum mud weight is 14.5 ppg.

### 7. Logging, Coring, and Testing

Logging: A dual induction, gamma ray, and caliper log will be run from KOP to the base of the

surface casing. A compensated neutron/formation density log will be run from TD to the top of the Garden Gulch formation. A cement bond log will be run from KOP to the cement top behind the production easing and or intermediate easing.

top behind the production casing and or intermediate casing.

Cores: As deemed necessary.

DST: There are no DST's planned for this well.

#### 8. Anticipated Abnormal Pressure or Temperature

Maximum anticipated bottomhole pressure will be approximately equal to total depth (feet) multiplied by a 0.73 psi/ft gradient.

No abnormal temperature is expected. No H<sub>2</sub>S is expected.

## 9. Other Aspects

The lateral of this well will target the Uteland Butte member of the Green River formation

After setting 9-5/8" casing, an 8-3/4" vertical hole will be drilled to a kick off point of

8,517'

Directional tools will then be used to build to

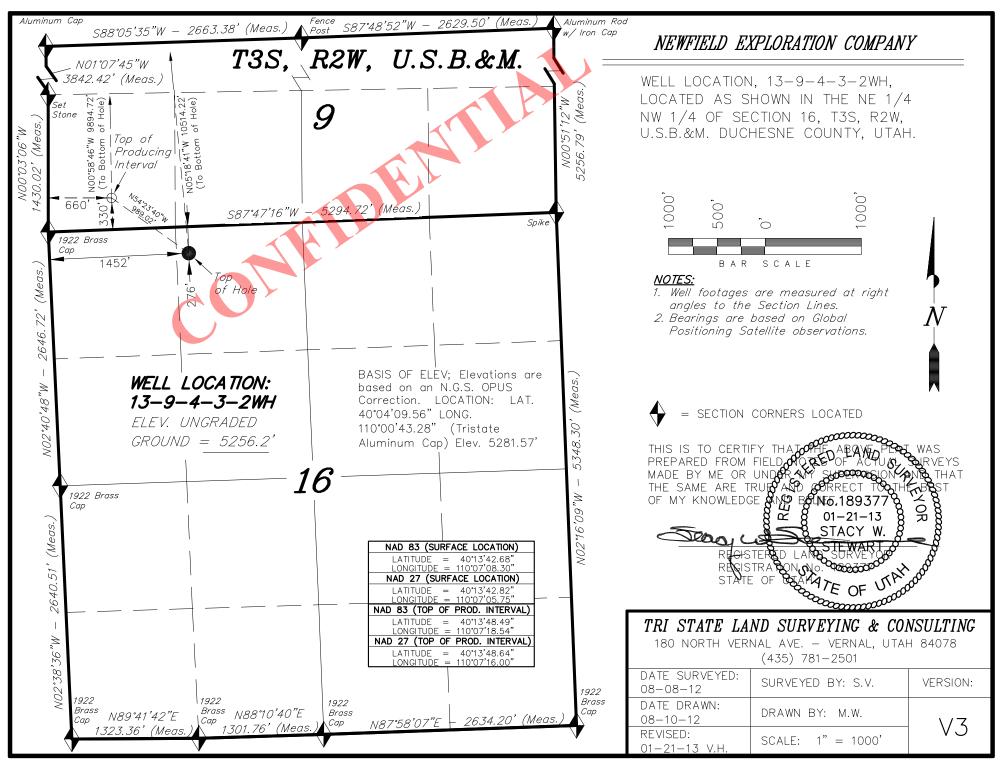
87.05 degrees inclination.

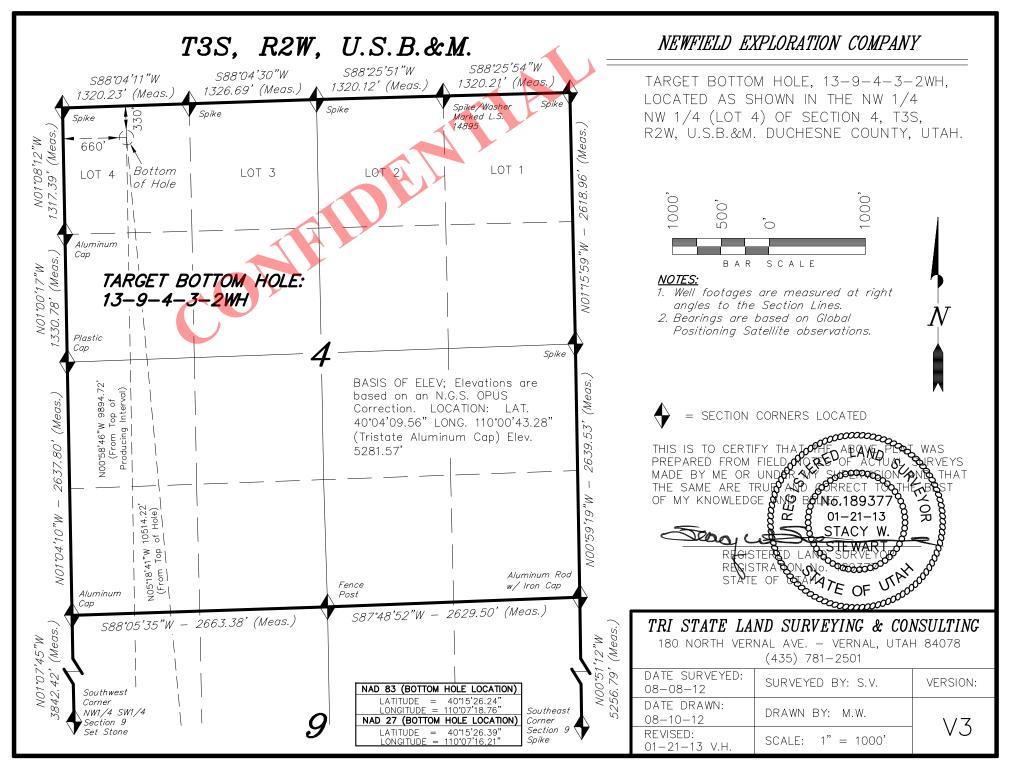
The lateral will be drilled to the bottomhole location shown on the plat. A 5-1/2" Long string will be run from TD to Surface. An open hole completion system with a series of open hole packers & sliding sleeves will be used to provide multi-stage frac isolation in the lateral. A Casing Packer will be placed at the 9-5/8" Shoe and a swell packer at the heal of the well for casing stability and frac isolation.

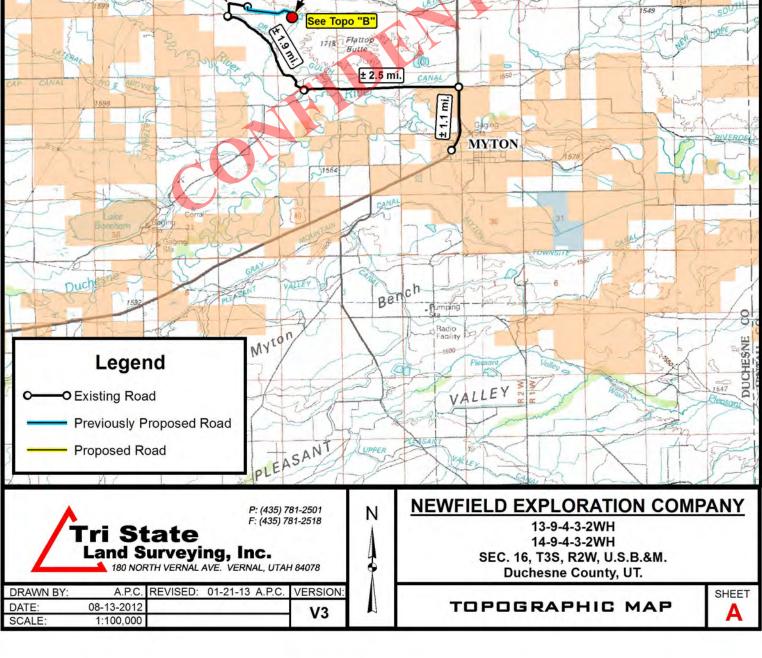
Newfield requests the following variances from Onshore Order #2:

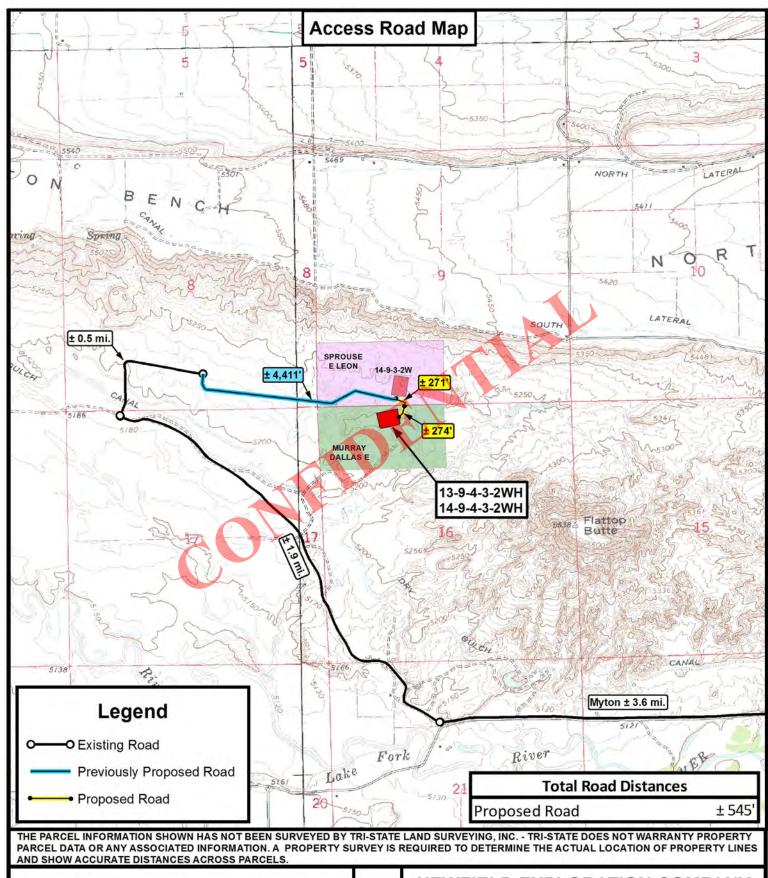
Variance from Onshoer Order #2, III.E.1
 Refer to Newfield Production Company Standard Operating Practices "Ute Tribal Green River Development Program" paragraph 9.0

If oil based mud (OBM) is used and If Newfield owns the surface rights on the same drilling site at a location where construction is desired, the cuttings may be used for construction by a Firmus® process at that location. Otherwise, after the cuttings have been made safe for transport as described in paragraph 6, they will be transported to another location on which Newfield owns surface rights and there mixed, as part of a Firmus® process, with at least one additional chemical that will convert them to a temporarily uncured cementitious mixture that will be placed and shaped into a temporary desired final structure that will spontaneously harden within seven days after placement to form the desired structure. Samples of the temporary desired final structure may be taken for testing as described below (after the samples have hardened), or samples of the starting pretreated cuttings and mud will be taken during the construction and later mixed in a laboratory, molded, and cured to simulate the final structure as well as reasonably possible. Either these laboratory-made simulations of the final structure or samples of the temporary mixture itself after hardening, will be mechanically tested directly to determine their unconfined compressive strength and their hydraulic conductivity. Leachates of the mechanically tested structures themselves or of finer particles made by crushing and size-grading of the mechanically tested structures themselves to a specified particle size range will be analyzed, according to specified methods, for their contents of arsenic, barium, cadmium, chromium, lead, mercury, selenium, silver, zinc, benzene, total petroleum hydrocarbons (TPH), and chlorides, and the pH of these leachates will also be measured. The results of all these tests will be reported by Newfield to UDOGM at intervals as requested, along with the latitude and longitude (or other comparable location data) of the site of the useful constructions built.











P: (435) 781-2501 F: (435) 781-2518 N

180 NORTH VERNAL AVE. VERNAL, UTAH 84078

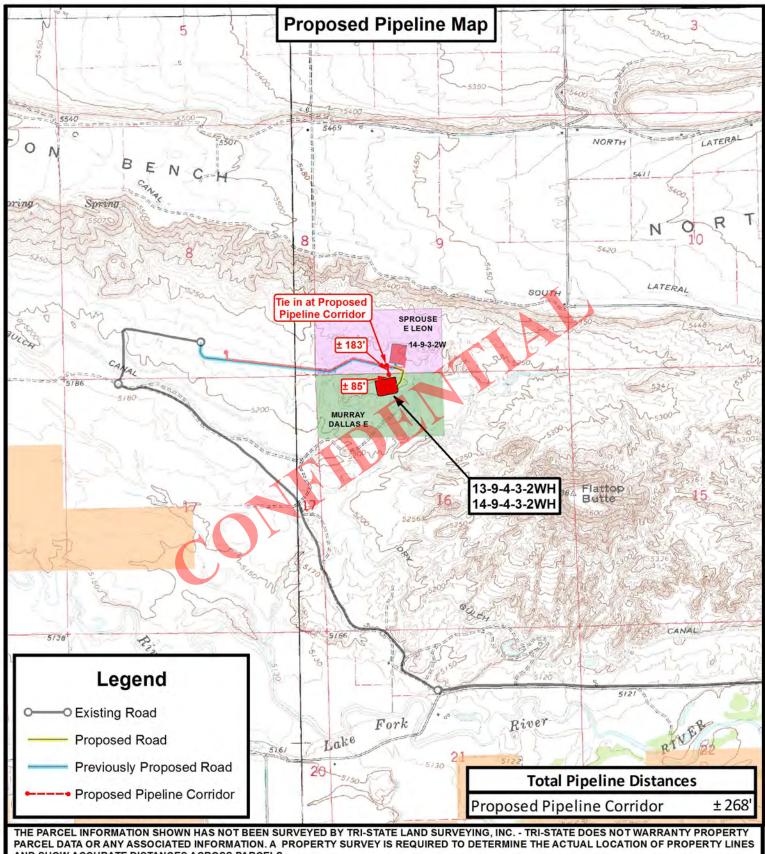
DRAWN BY:	A.P.C.	REVISED:	01-21-13	A.P.C.	VERSION:
DATE:	08-13-2012				V3
SCALE:	1"=2,000'				V3

# NEWFIELD EXPLORATION COMPANY

13-9-4-3-2WH 14-9-4-3-2WH SEC. 16, T3S, R2W, U.S.B.&M. **Duchesne County, UT.** 

TOPOGRAPHIC MAP





AND SHOW ACCURATE DISTANCES ACROSS PARCELS.

N



P: (435) 781-2501 F: (435) 781-2518

180 NORTH VERNAL AVE. VERNAL, UTAH 84078

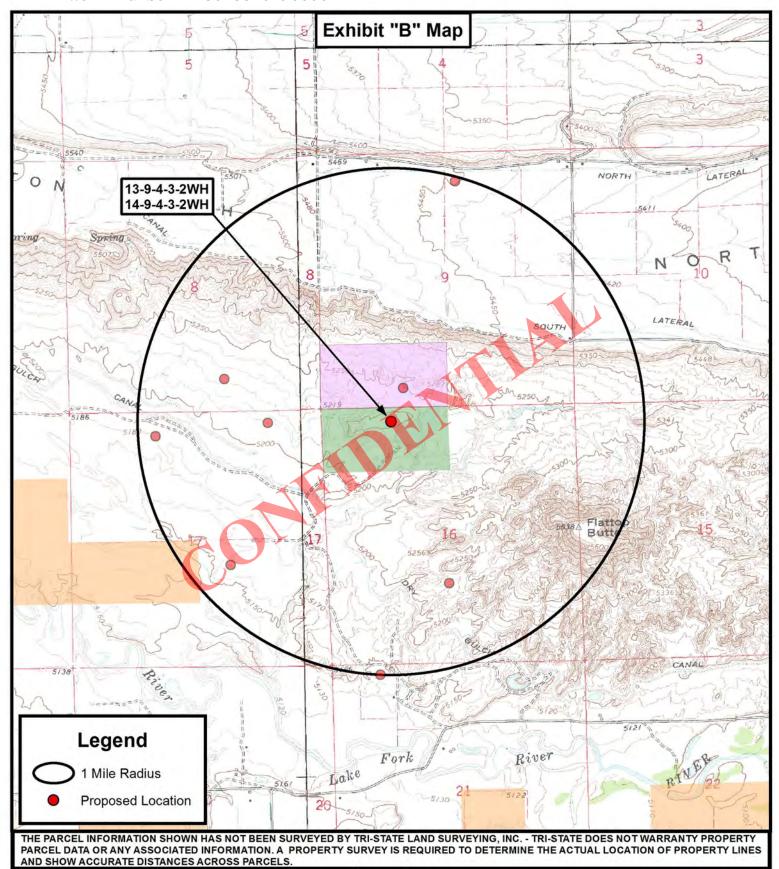
DRAWN BY:	A.P.C.	REVISED:	01-21-13 /	A.P.C.	VERSION:
DATE:	08-13-2012				V3
SCALE:	1 " = 2,000 '				VS

# NEWFIELD EXPLORATION COMPANY

13-9-4-3-2WH 14-9-4-3-2WH SEC. 16, T3S, R2W, U.S.B.&M. **Duchesne County, UT.** 

TOPOGRAPHIC MAP

SHEET





P: (435) 781-2501 F: (435) 781-2518

N

180 NORTH VERNAL AVE. VERNAL, UTAH 84078

DRAWN BY:	A.P.C.	REVISED:	01-21-13 A.P.C.	VERSION:
DATE:	08-13-2012			V3
SCALE:	1 " = 2,000 '			VJ

# **NEWFIELD EXPLORATION COMPANY**

13-9-4-3-2WH 14-9-4-3-2WH SEC. 16, T3S, R2W, U.S.B.&M. **Duchesne County, UT.** 

TOPOGRAPHIC MAP

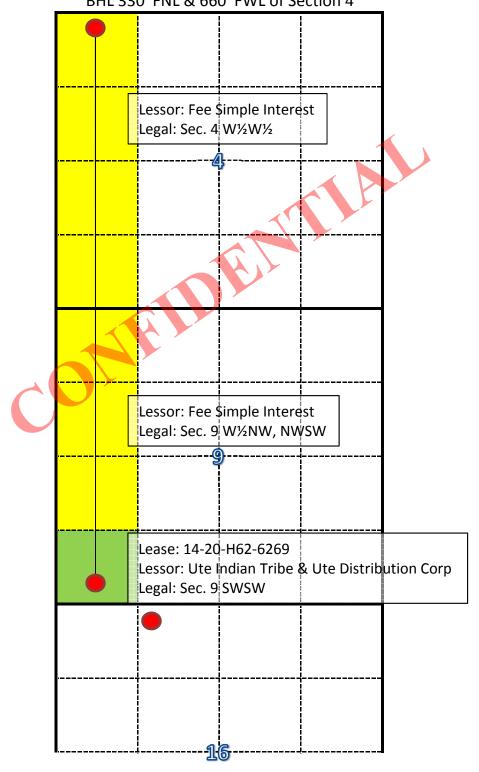


# **Ute Tribal 13-9-4-3-2WH**

SHL 276' FNL & 1452' FWL of Section 16

Top of Producing Interval 330' FSL & 660' FWL of Section 9

BHL 330' FNL & 660' FWL of Section 4





#### Planning Report



Database: EDM 5000.1 Lynn Db

Company: **NEWFIELD EXPLORATION ROCKY** 

**MOUNTAINS** 

DUCHESNE COUNTY, UT (NAD 83) Project:

Site: CENTRAL BASIN (NAD 83)

Well: 13-9-4-3-2WH

Wellbore: 13-9-4-3-2WH "UTE TRIBAL" Design: 13-9-4-3-2WH Rev01 Ute Tribal Local Co-ordinate Reference:

**TVD Reference:** 

**MD Reference:** 

North Reference:

**Survey Calculation Method:** 

Well 13-9-4-3-2WH

WELL(5256'+28'= 5284' MSL) @ 5284.00usft

(Pioneer 78 (KB= 28'))

WELL(5256'+28'= 5284' MSL) @ 5284.00usft

(Pioneer 78 (KB= 28'))

Minimum Curvature

**Project** DUCHESNE COUNTY, UT (NAD 83),

Map System: US State Plane 1983

North American Datum 1983 Geo Datum:

Utah Central Zone Map Zone:

System Datum: Mean Sea Level

Site **CENTRAL BASIN (NAD 83)** 

Northing: 7,254,409.48 usft Site Position: Latitude: Lat/Long Easting: 1,986,891.62 usft

From: Longitude:

**Position Uncertainty:** 0.00 usft **Slot Radius:** 

13-3/16 " **Grid Convergence:** 

0.00

40° 13' 43.080 N 110° 15' 32.490 W

0.79°

Well 13-9-4-3-2WH, UTE TRIBAL

**Well Position** 7,254,942.12 usft 40° 13' 42.680 N +N/-S -9.88 usft Northing: Latitude:

2,025,991.43 usft 110° 7' 8.300 W +E/-W 39,103.44 usft Easting: Longitude:

**Position Uncertainty** 0.00 usft Wellhead Elevation: 5.284.00 usft Ground Level: 5.256.00 usft

13-9-4-3-2WH "UTE TRIBAL" Wellbore

Magnetics Sample Date Declination Dip Angle Field Strength **Model Name** (°) (°) (nT) IGRF2010 7/2/2013 11.10 65.88 52,162

0.00

Design 13-9-4-3-2WH Rev01 Ute Tribal

**Audit Notes:** 

Version: Rev01 Phase: **PLAN** Tie On Depth: 0.00

0.00

+N/-S Direction **Vertical Section:** Depth From (TVD) +E/-W (usft) (usft) (usft) (°)

Plan Section	ıs									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	TFO (°)	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,500.00	0.00	0.00	1,500.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,600.00	0.00	0.00	1,600.00	0.00	0.00	0.00	0.00	0.00	0.00	
2,202.57	9.04	307.43	2,200.07	28.82	-37.67	1.50	1.50	0.00	307.43	
7,569.06	9.04	307.43	7,499.93	541.18	-707.18	0.00	0.00	0.00	0.00	
8,171.63	0.00	0.00	8,100.00	570.00	-744.85	1.50	-1.50	0.00	180.00	
8,431.63	0.00	0.00	8,360.00	570.00	-744.85	0.00	0.00	0.00	0.00	
8,481.63	0.00	0.00	8,410.00	570.00	-744.85	0.00	0.00	0.00	0.00	
8,516.63	0.00	0.00	8,445.00	570.00	-744.85	0.00	0.00	0.00	0.00	
9,137.56	84.05	0.00	8,866.00	949.40	-744.85	13.54	13.54	0.00	0.00	
9,312.56	84.05	0.00	8,884.14	1,123.46	-744.85	0.00	0.00	0.00	0.00	
9,412.56	87.05	0.00	8,891.90	1,223.15	-744.85	3.00	3.00	0.00	0.00	
13,722.12	87.05	0.00	9,113.69	5,527.00	-744.85	0.00	0.00	0.00	0.00	Pt1 (13-9-4-3-2WF
13,735.11	87.05	359.74	9,114.36	5,539.97	-744.88	2.00	0.00	-2.00	-90.01	
18,662.70	87.05	359.74	9,367.95	10,460.98	-767.21	0.00	0.00	0.00	0.00	TD-PBHL (13-9-4-3

0.00





Database: EDM 5000.1 Lynn Db

Company: NEWFIELD EXPLORATION ROCKY

MOUNTAINS

Project: DUCHESNE COUNTY, UT (NAD 83)

Site: CENTRAL BASIN (NAD 83)

Well: 13-9-4-3-2WH

Wellbore: 13-9-4-3-2WH "UTE TRIBAL"

Design: 13-9-4-3-2WH Rev01 Ute Tribal

**Local Co-ordinate Reference:** 

**TVD Reference:** 

MD Reference:

North Reference: Survey Calculation Method: Well 13-9-4-3-2WH

WELL(5256'+28'= 5284' MSL) @ 5284.00usft

(Pioneer 78 (KB= 28'))

WELL(5256'+28'= 5284' MSL) @ 5284.00usft

(Pioneer 78 (KB= 28'))

True

sign.	.00.01.	n Kevo i Ole	Tibai						
anned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
100.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00
200.00 300.00	0.00 0.00	0.00 0.00	200.00 300.00	0.00 0.00	0.00 0.00	0.00 0.00	0.00	0.00	0.00 0.00
400.00	0.00	0.00	400.00	0.00	0.00	0.00	0.00	0.00	0.00
500.00	0.00	0.00	500.00	0.00	0.00	0.00	0.00	0.00	0.00
600.00	0.00	0.00	600.00	0.00	0.00	0.00	0.00	0.00	0.00
700.00	0.00	0.00	700.00	0.00	0.00	0.00	0.00	0.00	0.00
800.00	0.00	0.00	800.00	0.00	0.00	0.00	0.00	0.00	0.00
900.00	0.00	0.00	900.00	0.00	0.00	0.00	0.00	0.00	0.00
1,000.00	0.00	0.00	1,000.00	0.00	0.00	0.00	0.00	0.00	0.00
1,100.00	0.00	0.00	1,100.00	0.00	0.00	0.00	0.00	0.00	0.00
1,200.00	0.00	0.00	1,200.00	0.00	0.00	0.00	0.00	0.00	0.00
1,300.00 1,400.00	0.00 0.00	0.00 0.00	1,300.00 1,400.00	0.00	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00
•									
1,500.00	0.00	0.00	1,500.00	0.00	0.00	0.00	0.00	0.00	0.00
Tangent= 1 1,600.00	00 ft. at 1500 0.00	<b>MD-TVD</b> 0.00 <b>△</b>	1,600.00	0.00	0.00	0.00	0.00	0.00	0.00
,	0.00 - Build Rate=			0.00	0.00	0.00	0.00	0.00	0.00
1,700.00	1.50	307.43	1,699.99	0.80	-1.04	0.80	1.50	1.50	0.00
1,800.00	3.00	307.43	1,799.91	3.18	-4.16	3.18	1.50	1.50	0.00
1,900.00	4.50	307.43	1,899.69	7.16	-9.35	7.16	1.50	1.50	0.00
2,000.00	6.00	307.43	1,999.27	12.72	-16.62	12.72	1.50	1.50	0.00
2,100.00	7.50	307.43	2,098.57	19.86	-25.95	19.86	1.50	1.50	0.00
2,202.57	9.04	307.43	2,200.07	28.82	-37.67	28.82	1.50	1.50	0.00
_	ent= 5367 ft at								
2,300.00	9.04	307.43	2,296.29	38.13	-49.82	38.13	0.00	0.00	0.00
2,400.00	9.04	307.43	2,395.05	47.67	-62.30	47.67	0.00	0.00	0.00
2,500.00	9.04	307.43	2,493.81	57.22	-74.77	57.22	0.00	0.00	0.00
2,600.00	9.04 9.04	307.43 307.43	2,592.57	66.77 76.32	-87.25 -99.73	66.77 76.32	0.00	0.00	0.00
2,700.00 2,800.00	9.04 9.04	307.43 307.43	2,691.33 2,790.09	76.32 85.86	-99.73 -112.20	76.32 85.86	0.00 0.00	0.00 0.00	0.00 0.00
2,900.00	9.04	307.43	2,888.84	95.41	-124.68	95.41	0.00	0.00	0.00
3,000.00	9.04	307.43	2,987.60	104.96	-137.15	104.96	0.00	0.00	0.00
3,100.00	9.04	307.43	3,086.36	114.50	-149.63	114.50	0.00	0.00	0.00
3,200.00	9.04	307.43	3,185.12	124.05	-162.10	124.05	0.00	0.00	0.00
3,300.00	9.04	307.43	3,283.88	133.60	-174.58	133.60	0.00	0.00	0.00
3,400.00	9.04	307.43	3,382.64	143.15	-187.06	143.15	0.00	0.00	0.00
3,500.00	9.04	307.43	3,481.39	152.69	-199.53	152.69	0.00	0.00	0.00
3,600.00	9.04	307.43	3,580.15	162.24	-212.01	162.24	0.00	0.00	0.00
3,657.56	9.04	307.43	3,637.00	167.74	-219.19	167.74	0.00	0.00	0.00
3.700.00	r Formation 9.04	307.43	3,678.91	171.79	-224.48	171.79	0.00	0.00	0.00
3,700.00	9.04 9.04	307.43 307.43	3,678.91	181.33	-224.48 -236.96	171.79	0.00	0.00	0.00
•									
3,900.00 4,000.00	9.04 9.04	307.43 307.43	3,876.43 3,975.19	190.88 200.43	-249.44 -261.91	190.88 200.43	0.00 0.00	0.00 0.00	0.00 0.00
4,100.00	9.04	307.43	4,073.94	200.43	-201.91	200.43	0.00	0.00	0.00
4,200.00	9.04	307.43	4,172.70	219.52	-286.86	219.52	0.00	0.00	0.00
4,300.00	9.04	307.43	4,271.46	229.07	-299.34	229.07	0.00	0.00	0.00
4,400.00	9.04	307.43	4,370.22	238.62	-311.82	238.62	0.00	0.00	0.00
4,500.00	9.04	307.43	4,468.98	248.17	-324.29	248.17	0.00	0.00	0.00





EDM 5000.1 Lynn Db Database:

**NEWFIELD EXPLORATION ROCKY** Company:

**MOUNTAINS** 

Project: DUCHESNE COUNTY, UT (NAD 83)

Site: CENTRAL BASIN (NAD 83)

Well: 13-9-4-3-2WH

Wellbore: 13-9-4-3-2WH "UTE TRIBAL" **Local Co-ordinate Reference:** 

**TVD Reference:** 

MD Reference:

North Reference: **Survey Calculation Method:**  Well 13-9-4-3-2WH

WELL(5256'+28'= 5284' MSL) @ 5284.00usft

(Pioneer 78 (KB= 28'))

WELL(5256'+28'= 5284' MSL) @ 5284.00usft (Pioneer 78 (KB= 28'))

Design:	13-9-4-3-2W	H Rev01 Ute T	Tribal						
Planned Survey									
Measured	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
4,600.00 4,700.00 4,800.00	9.04 9.04 9.04	307.43 307.43 307.43	4,567.74 4,666.49 4,765.25	257.71 267.26 276.81	-336.77 -349.24 -361.72	257.71 267.26 276.81	0.00 0.00 0.00	0.00 0.00 0.00	0.00 0.00 0.00
4,900.00 5,000.00 5,100.00 5,200.00 5,300.00	9.04 9.04 9.04 9.04 9.04	307.43 307.43 307.43 307.43 307.43	4,864.01 4,962.77 5,061.53 5,160.28 5,259.04	286.35 295.90 305.45 315.00 324.54	-374.19 -386.67 -399.15 -411.62 -424.10	286.35 295.90 305.45 315.00 324.54	0.00 0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00 0.00
5,400.00 5,500.00 5,600.00 5,681.70 <b>Trona</b>	9.04 9.04 9.04 9.04	307.43 307.43 307.43 307.43	5,357.80 5,456.56 5,555.32 5,636.00	334.09 343.64 353.19 360.98	-436.57 -449.05 -461.53 -471.72	334.09 343.64 353.19 360.98	0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00
5,700.00	9.04	307.43	5,654.08	362.73	-474.00	362.73	0.00	0.00	0.00
5,727.26	9.04	307.43	5,681.00	365.34	-477.40	365.34	0.00	0.00	0.00
Mahogany B 5,800.00 5,900.00		307.43 307.43	5,752.83 5,851.59	372.28 381.83	-486.48 -498.95	372.28 381.83	0.00	0.00	0.00
6,000.00 6,100.00	9.04 9.04 9.04	307.43 307.43 307.43	5,950.35 6,049.11	391.37 400.92	-496.95 -511.43 -523.91	391.37 400.92	0.00 0.00	0.00 0.00 0.00	0.00 0.00 0.00
6,200.00 6,300.00 6,400.00 6,500.00 6,600.00	9.04 9.04 9.04 9.04 9.04	307.43 307.43 307.43 307.43 307.43	6,147.87 6,246.63 6,345.38 6,444.14 6,542.90	410.47 420.02 429.56 439.11 448.66	-536.38 -548.86 -561.33 -573.81 -586.29	410.47 420.02 429.56 439.11 448.66	0.00 0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00 0.00
6,632.50	9.04	307.43	6,575.00	451.76	-590.34	451.76	0.00	0.00	0.00
Garden Gul 6,700.00 6,800.00 6,900.00 6,910.96	9.04 9.04 9.04 9.04 9.04 ch Member-1	307.43 307.43 307.43 307.43	6,641.66 6,740.42 6,839.18 6,850.00	458.20 467.75 477.30 478.35	-598.76 -611.24 -623.71 -625.08	458.20 467.75 477.30 478.35	0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00
7,000.00	9.04	307.43	6,937.93	486.85	-636.19	486.85	0.00	0.00	0.00
7,000.00	9.04	307.43	7,034.00	496.13	-648.32	496.13	0.00	0.00	0.00
7,100.00 7,200.00 7,300.00	9.04 9.04 9.04 9.04	307.43 307.43 307.43	7,036.69 7,135.45 7,234.21	496.39 505.94 515.49	-648.66 -661.14 -673.62	496.39 505.94 515.49	0.00 0.00 0.00	0.00 0.00 0.00	0.00 0.00 0.00
7,400.00 7,500.00 7,569.06	9.04 9.04 9.04	307.43 307.43 307.43	7,332.97 7,431.73 7,499.93	525.04 534.58 541.18	-686.09 -698.57 -707.18	525.04 534.58 541.18	0.00 0.00 0.00	0.00 0.00 0.00	0.00 0.00 0.00
Nudge Drop 7,600.00	Rate= -1.50/ 8.57	<b>100' MD</b> 307.43	7,530.50	544.05	-710.95	544.05	1.50	-1.50	0.00
7,800.00 7,700.00 7,800.00	7.07 5.57	307.43 307.43 307.43	7,530.50 7,629.57 7,728.96	552.33 559.02	-710.95 -721.76 -730.50	552.33 559.02	1.50 1.50 1.50	-1.50 -1.50 -1.50	0.00 0.00 0.00
7,800.00 7,891.43	5.57 4.20	307.43 307.43	7,728.96 7,820.05	559.02 563.76	-730.50 -736.69	559.02 563.76	1.50	-1.50 -1.50	0.00
·	eek Member		,						
7,900.00 8,000.00 8,100.00	4.07 2.57 1.07	307.43 307.43 307.43	7,828.60 7,928.43 8,028.38	564.13 567.66 569.59	-737.18 -741.79 -744.32	564.13 567.66 569.59	1.50 1.50 1.50	-1.50 -1.50 -1.50	0.00 0.00 0.00
8,171.63	0.00	0.00	8,100.00	570.00	-744.85	570.00	1.50	-1.50	0.00





Database: EDM 5000.1 Lynn Db

Company: NEWFIELD EXPLORATION ROCKY

MOUNTAINS

Project: DUCHESNE COUNTY, UT (NAD 83)

Site: CENTRAL BASIN (NAD 83)

Well: 13-9-4-3-2WH

Wellbore: 13-9-4-3-2WH "UTE TRIBAL"

Design: 13-9-4-3-2WH Rev01 Ute Tribal

**Local Co-ordinate Reference:** 

TVD Reference:

MD Reference:

North Reference: Survey Calculation Method: Well 13-9-4-3-2WH

WELL(5256'+28'= 5284' MSL) @ 5284.00usft

(Pioneer 78 (KB= 28'))

WELL(5256'+28'= 5284' MSL) @ 5284.00usft

(Pioneer 78 (KB= 28'))

True

nned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
Nudge Vei	rt. Pt.= 8172 MI	D- 8100 TVD							
8,200.00 8,300.00 <b>B Limesto</b>	0.00 0.00	0.00 0.00	8,128.37 8,228.37	570.00 570.00	-744.85 -744.85	570.00 570.00	0.00 0.00	0.00 0.00	0.00 0.00
8,400.00 8,431.63	0.00 0.00	0.00 0.00	8,328.37 8,360.00	570.00 570.00	-744.85 -744.85	570.00 570.00	0.00 0.00	0.00 0.00	0.00 0.00
Top Lowe	r Black Shale-S	Start 50 ft Tan	gent						
8,435.00	0.00	0.00	8,363.37	570.00	-744.85	570.00	0.00	0.00	0.00
Lower Bla	ck Shale								
8,481.63	0.00	0.00	8,410.00	570.00	-744.85	570.00	0.00	0.00	0.00
•	art 35 ft. Tangr	•			Wir				
8,500.00	0.00	0.00	8,428.37	570.00	-744.85	570.00	0.00	0.00	0.00
8,516.63	0.00	0.00	8,445.00	570.00	-744.85	570.00	0.00	0.00	0.00
	P-Build Rate=				74405	570.00	10.51	10.51	0.00
8,525.00	1.13	0.00	8,453.37	570.08	-744.85	570.08	13.54	13.54	0.00
8,550.00	4.52	0.00	8,478.34	571.31	-744.85	571.31	13.54	13.54	0.00
8,575.00	7.90	0.00	8,503.19	574.02	-744.85	574.02	13.54	13.54	0.00
8,582.53	8.92	0.00	8,510.64	575.12	-744.85	575.12	13.54	13.54	0.00
	ak Limestone		<b>L</b>						
8,600.00 8,625.00	11.29 14.67	0.00	8,527.83 8,552.19	578.18 583.80	-744.85 -744.85	578.18 583.80	13.54 13.54	13.54 13.54	0.00 0.00
8,650.00	18.05	0.00	8,576.18	590.84	-744.85	590.84	13.54	13.54	0.00
8,675.00	21.44	0.00	8,599.70	599.28	-744.85	599.28	13.54	13.54	0.00
8,700.00	24.82	0.00	8,622.69	609.10	-744.85	609.10	13.54	13.54	0.00
8,725.00	28.21	0.00 0.00	8,645.06	620.26 632.72	-744.85	620.26 632.72	13.54 13.54	13.54	0.00
8,750.00	31.59		8,666.73		-744.85			13.54	0.00
8,757.17	32.56	0.00	8,672.80	636.53	-744.85	636.53	13.54	13.54	0.00
CP LIMES									
8,775.00	34.97	0.00	8,687.62	646.44	-744.85	646.44	13.54	13.54	0.00
8,800.00	38.36	0.00	8,707.67	661.36	-744.85	661.36	13.54	13.54	0.00
8,825.00 8,850.00	41.74 45.13	0.00 0.00	8,726.81 8,744.96	677.45 694.63	-744.85 -744.85	677.45 694.63	13.54 13.54	13.54 13.54	0.00 0.00
•			•						
8,875.00	48.51	0.00	8,762.07	712.86	-744.85	712.86	13.54	13.54	0.00
8,900.00	51.89	0.00	8,778.07	732.06	-744.85	732.06	13.54	13.54	0.00
8,925.00 8,944.42	55.28 57.91	0.00 0.00	8,792.90 8,803.60	752.18 768.39	-744.85 -744.85	752.18 768.39	13.54 13.54	13.54 13.54	0.00 0.00
Uteland B		0.00	0,003.00	100.33	-144.00	100.39	13.54	13.54	0.00
8,950.00	utte 58.66	0.00	8,806.53	773.14	-744.85	773.14	13.54	13.54	0.00
•									
8,965.92	60.82	0.00	8,814.55	786.89	-744.85	786.89	13.54	13.54	0.00
U.B A			0.040.00	70 / 00	7	76 1 66			
8,975.00	62.05	0.00	8,818.89	794.86	-744.85	794.86	13.54	13.54	0.00
9,000.00 9,000.44	65.43 65.49	0.00 0.00	8,829.95 8,830.14	817.28 817.68	-744.85 -744.85	817.28 817.68	13.54 13.54	13.54 13.54	0.00 0.00
	05.49	0.00	0,030.14	017.00	-744.00	017.00	13.34	13.34	0.00
<b>U.B B</b> 9,025.00	68.81	0.00	8,839.67	840.31	-744.85	840.31	13.54	13.54	0.00
•									
9,050.00	72.20	0.00	8,848.01	863.87	-744.85	863.87	13.54	13.54	0.00
9,075.00	75.58	0.00	8,854.95	887.89	-744.85	887.89	13.54	13.54	0.00
9,100.00	78.97	0.00	8,860.46	912.27	-744.85	912.27	13.54	13.54	0.00
9,125.00	82.35 83.86	0.00	8,864.51 8,865.85	936.93	-744.85 -744.85	936.93	13.54	13.54 13.54	0.00
			0,000.00	340.03	-744.00	540.03	13.34	13.34	0.00
9,136.18 <b>U.B C</b> _L	83.86 and Pt (84.05°)	0.00	8,865.85	948.03	-744.85	948.03	13.54	13.54	0.00





Database: EDM 5000.1 Lynn Db

Company: NEWFIELD EXPLORATION ROCKY

**MOUNTAINS** 

Project: DUCHESNE COUNTY, UT (NAD 83)

Site: CENTRAL BASIN (NAD 83)

Well: 13-9-4-3-2WH

Wellbore: 13-9-4-3-2WH "UTE TRIBAL"

Design: 13-9-4-3-2WH Rev01 Ute Tribal

**Local Co-ordinate Reference:** 

**TVD Reference:** 

MD Reference:

North Reference: Survey Calculation Method: Well 13-9-4-3-2WH

WELL(5256'+28'= 5284' MSL) @ 5284.00usft

(Pioneer 78 (KB= 28'))

WELL(5256'+28'= 5284' MSL) @ 5284.00usft (Pioneer 78 (KB= 28'))

True

sign	1:	13-9-4-3-2W	'H Rev01 Ute	Tribal						
nne	ed Survey									
	Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
	9,137.56	84.05 <b>34.05°) 9138 M</b> I	0.00 D- 8866 TVD	8,866.00	949.40	-744.85	949.40	13.54	13.54	0.00
	9,200.00 9,300.00 9,312.56	84.05 84.05 84.05	0.00 0.00 0.00	8,872.47 8,882.84 8,884.14	1,011.51 1,110.97 1,123.46	-744.85 -744.85 -744.85	1,011.51 1,110.97 1,123.46	0.00 0.00 0.00	0.00 0.00 0.00	0.00 0.00 0.00
	9,400.00	d Rate= 3.00°/ 86.67	0.00 O.00	0 001 21	1,210.61	-744.85	1,210.61	3.00	3.00	0.00
	9,400.00	87.05	0.00	8,891.21 8,891.90	1,210.61	-744.85 -744.85	1,210.61	3.00	3.00	0.00
	•	orz Tgt (87.05			1,223.13	-744.83	1,223.13	3.00	3.00	0.00
	9,500.00	87.05	0.00	8,896.40	1,310.47	-744.85	1,310.47	0.00	0.00	0.00
	9,600.00 9,700.00 9,800.00	87.05 87.05 87.05	0.00 0.00 0.00	8,901.55 8,906.69 8,911.84	1,410.34 1,510.21 1,610.08	-744.85 -744.85 -744.85	1,410.34 1,510.21 1,610.08	0.00 0.00 0.00	0.00 0.00 0.00	0.00 0.00 0.00
	9,900.00	87.05	0.00	8,916.98	1,709.94	-744.85	1,709.94	0.00	0.00	0.00
	10,000.00	87.05	0.00	8,922.13	1,809.81	-744.85	1,809.81	0.00	0.00	0.00
	10,100.00 10.200.00	87.05	0.00	8,927.28	1,909.68	-744.85	1,909.68	0.00	0.00	0.00
	10,200.00	87.05 87.05	0.00 0.00	8,932.42 8,937.57	2,009.55 2,109.41	-744.85 -744.85	2,009.55 2,109.41	0.00 0.00	0.00 0.00	0.00 0.00
	10,400.00	87.05	0.00	8,942.72	2,209.28	-744.85	2,209.28	0.00	0.00	0.00
	10,500.00	87.05	0.00	8,947.86	2,309.15	-744.85	2,309.15	0.00	0.00	0.00
	10,600.00	87.05	0.00	8,953.01	2,409.02	-744.85	2,409.02	0.00	0.00	0.00
	10,700.00	87.05	0.00	8,958.16	2,508.88	-744.85	2,508.88	0.00	0.00	0.00
	10,800.00	87.05	0.00	8,963.30	2,608.75	-744.85	2,608.75	0.00	0.00	0.00
	10,900.00	87.05	0.00	8,968.45	2,708.62	-744.85	2,708.62	0.00	0.00	0.00
	11,000.00	87.05	0.00	8,973.60	2,808.49	-744.85	2,808.49	0.00	0.00	0.00
	11,100.00	87.05	0.00	8,978.74	2,908.35	-744.85	2,908.35	0.00	0.00	0.00
	11,200.00 11,300.00	87.05 87.05	0.00 0.00	8,983.89 8,989.03	3,008.22 3,108.09	-744.85 -744.85	3,008.22 3,108.09	0.00 0.00	0.00 0.00	0.00 0.00
	•			•	·		•			
	11,400.00 11,500.00	87.05 87.05	0.00 0.00	8,994.18 8,999.33	3,207.96 3,307.82	-744.85 -744.85	3,207.96 3,307.82	0.00 0.00	0.00 0.00	0.00 0.00
	11,600.00	87.05	0.00	9,004.47	3,407.69	-744.85	3,407.69	0.00	0.00	0.00
	11,700.00	87.05	0.00	9,009.62	3,507.56	-744.85	3,507.56	0.00	0.00	0.00
	11,800.00	87.05	0.00	9,014.77	3,607.43	-744.85	3,607.43	0.00	0.00	0.00
	11,900.00	87.05	0.00	9,019.91	3,707.29	-744.85	3,707.29	0.00	0.00	0.00
	12,000.00	87.05	0.00	9,025.06	3,807.16	-744.85	3,807.16	0.00	0.00	0.00
	12,100.00	87.05	0.00	9,030.21	3,907.03	-744.85	3,907.03	0.00	0.00	0.00
	12,200.00	87.05	0.00	9,035.35	4,006.89	-744.85	4,006.89	0.00	0.00	0.00
	12,300.00	87.05	0.00	9,040.50	4,106.76	-744.85	4,106.76	0.00	0.00	0.00
	12,400.00	87.05	0.00	9,045.65	4,206.63	-744.85	4,206.63	0.00	0.00	0.00
	12,500.00	87.05	0.00	9,050.79	4,306.50	-744.85	4,306.50	0.00	0.00	0.00
	12,600.00	87.05	0.00	9,055.94	4,406.36	-744.85	4,406.36	0.00	0.00	0.00
	12,700.00	87.05	0.00	9,061.09	4,506.23	-744.85	4,506.23	0.00	0.00	0.00
	12,800.00	87.05	0.00	9,066.23	4,606.10	-744.85	4,606.10	0.00	0.00	0.00
	12,900.00	87.05	0.00	9,071.38	4,705.97	-744.85	4,705.97	0.00	0.00	0.00
	13,000.00	87.05	0.00	9,076.52	4,805.83	-744.85	4,805.83	0.00	0.00	0.00
	13,100.00	87.05	0.00	9,081.67	4,905.70	-744.85	4,905.70	0.00	0.00	0.00
	13,200.00 13,300.00	87.05 87.05	0.00 0.00	9,086.82 9,091.96	5,005.57 5,105.44	-744.85 -744.85	5,005.57 5,105.44	0.00 0.00	0.00 0.00	0.00 0.00
	•				·					
	13,400.00	87.05	0.00	9,097.11	5,205.30	-744.85	5,205.30	0.00	0.00	0.00
	13,500.00	87.05	0.00	9,102.26	5,305.17	-744.85	5,305.17	0.00	0.00	0.00
	13,600.00	87.05	0.00	9,107.40	5,405.04	-744.85	5,405.04	0.00	0.00	0.00





Database: EDM 5000.1 Lynn Db

Company: NEWFIELD EXPLORATION ROCKY

MOUNTAINS

Project: DUCHESNE COUNTY, UT (NAD 83)

Site: CENTRAL BASIN (NAD 83)

Well: 13-9-4-3-2WH

Wellbore: 13-9-4-3-2WH "UTE TRIBAL"

Design: 13-9-4-3-2WH Rev01 Ute Triba

**Local Co-ordinate Reference:** 

**TVD Reference:** 

MD Reference:

North Reference: Survey Calculation Method: Well 13-9-4-3-2WH

WELL(5256'+28'= 5284' MSL) @ 5284.00usft

(Pioneer 78 (KB= 28'))

WELL(5256'+28'= 5284' MSL) @ 5284.00usft (Pioneer 78 (KB= 28'))

T....

Design:	13-9-4-3-2W	'H Rev01 Ute	Tribal						
Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
13,700.00 13,722.12	87.05 87.05 <b>2.00/100' MD</b> -	0.00 0.00	9,112.55 9,113.69	5,504.91 5,527.00	-744.85 -744.85	5,504.91 5,527.00	0.00 0.00	0.00 0.00	0.00 0.00
13,735.11	87.05 ent= <b>4928</b> ft. at	359.74	9,114.36	5,539.97	-744.88	5,539.97	2.00	0.00	-2.00
13,800.00	87.05	359.74	9,117.70	5,604.77	-745.17	5,604.77	0.00	0.00	0.00
13,900.00	87.05	359.74	9,122.84	5,704.64	-745.63	5,704.64	0.00	0.00	0.00
14,000.00	87.05	359.74	9,127.99	5,804.51	-746.08	5,804.51	0.00	0.00	0.00
14,100.00	87.05	359.74	9,133.14	5,904.37	-746.53	5,904.37	0.00	0.00	0.00
14,200.00	87.05	359.74	9,138.28	6,004.24	-746,99	6,004.24	0.00	0.00	0.00
14,300.00	87.05	359.74	9,143.43	6,104.11	-747.44	6,104.11	0.00	0.00	0.00
14,400.00	87.05	359.74	9,148.57	6,203.97	-747.89	6,203.97	0.00	0.00	0.00
14,500.00	87.05	359.74	9,153.72	6,303.84	-748.35	6,303.84	0.00	0.00	0.00
14,600.00	87.05	359.74	9,158.87	6,403.71	-748.80	6,403.71	0.00	0.00	0.00
14,700.00	87.05	359.74	9,164.01	6,503.57	-749.25	6,503.57	0.00	0.00	0.00
14,800.00	87.05	359.74	9,169.16	6,603.44	-749.71	6,603.44	0.00	0.00	0.00
14,900.00	87.05	359.74	9,174.31	6,703.31	-750.16	6,703.31	0.00	0.00	0.00
15,000.00	87.05	359.74	9,179.45	6,803.17	-750.61	6,803.17	0.00	0.00	0.00
15,100.00	87.05	359.74	9,184.60	6,903.04	-751.06	6,903.04	0.00	0.00	0.00
15,200.00	87.05	359.74	9,189.75	7,002.90	-751.52	7,002.90	0.00	0.00	0.00
15,300.00	87.05	359.74	9,194.89	7,102.77	-751.97	7,102.77	0.00	0.00	0.00
15,400.00	87.05	359.74	9,200.04	7,202.64	-752.42	7,202.64	0.00	0.00	0.00
15,500.00	87.05	359.74	9,205.19	7,302.50	-752.88	7,302.50	0.00	0.00	0.00
15,600.00	87.05	359.74	9,210.33	7,402.37	-753.33	7,402.37	0.00	0.00	0.00
15,700.00	87.05	359.74	9,215.48	7,502.24	-753.78	7,502.24	0.00	0.00	0.00
15,800.00	87.05	359.74	9,220.63	7,602.10	-754.24	7,602.10	0.00	0.00	0.00
15,900.00	87.05	359.74	9,225.77	7,701.97	-754.69	7,701.97	0.00	0.00	0.00
16,000.00	87.05	359.74	9,230.92	7,801.84	-755.14	7,801.84	0.00	0.00	0.00
16,100.00	87.05	359.74	9,236.06	7,901.70	-755.60	7,901.70	0.00	0.00	0.00
16,200.00	87.05	359.74	9,241.21	8,001.57	-756.05	8,001.57	0.00	0.00	0.00
16,300.00	87.05	359.74	9,246.36	8,101.44	-756.50	8,101.44	0.00	0.00	0.00
16,400.00	87.05	359.74	9,251.50	8,201.30	-756.96	8,201.30	0.00	0.00	0.00
16,500.00	87.05	359.74	9,256.65	8,301.17	-757.41	8,301.17	0.00	0.00	0.00
16,600.00	87.05	359.74	9,261.80	8,401.03	-757.86	8,401.03	0.00	0.00	0.00
16,700.00	87.05	359.74	9,266.94	8,500.90	-758.32	8,500.90	0.00	0.00	0.00
16,800.00	87.05	359.74	9,272.09	8,600.77	-758.77	8,600.77	0.00	0.00	0.00
16,900.00	87.05	359.74	9,277.24	8,700.63	-759.22	8,700.63	0.00	0.00	0.00
17,000.00	87.05	359.74	9,282.38	8,800.50	-759.68	8,800.50	0.00	0.00	0.00
17,100.00	87.05	359.74	9,287.53	8,900.37	-760.13	8,900.37	0.00	0.00	0.00
17,200.00	87.05	359.74	9,292.68	9,000.23	-760.58	9,000.23	0.00	0.00	0.00
17,300.00	87.05	359.74	9,297.82	9,100.10	-761.03	9,100.10	0.00	0.00	0.00
17,400.00	87.05	359.74	9,302.97	9,199.97	-761.49	9,199.97	0.00	0.00	0.00
17,500.00	87.05	359.74	9,308.11	9,299.83	-761.94	9,299.83	0.00	0.00	0.00
17,600.00	87.05	359.74	9,313.26	9,399.70	-762.39	9,399.70	0.00	0.00	0.00
17,700.00	87.05	359.74	9,318.41	9,499.57	-762.85	9,499.57	0.00	0.00	0.00
17,800.00	87.05	359.74	9,323.55	9,599.43	-763.30	9,599.43	0.00	0.00	0.00
17,900.00	87.05	359.74	9,328.70	9,699.30	-763.75	9,699.30	0.00	0.00	0.00
18,000.00	87.05	359.74	9,333.85	9,799.17	-764.21	9,799.17	0.00	0.00	0.00
18,100.00	87.05	359.74	9,338.99	9,899.03	-764.66	9,899.03	0.00	0.00	0.00
18,200.00	87.05	359.74	9,344.14	9,998.90	-765.11	9,998.90	0.00	0.00	0.00
18,300.00	87.05	359.74	9,349.29	10,098.76	-765.57	10,098.76	0.00	0.00	0.00
18,400.00	87.05	359.74	9,354.43	10,198.63	-766.02	10,198.63	0.00	0.00	0.00



## **Planning Report**



Database: EDM 5000.1 Lynn Db

Company: NEWFIELD EXPLORATION ROCKY

MOUNTAINS

Project: DUCHESNE COUNTY, UT (NAD 83)

Site: CENTRAL BASIN (NAD 83)

Well: 13-9-4-3-2WH

Wellbore: 13-9-4-3-2WH "UTE TRIBAL"

Design: 13-9-4-3-2WH Rev01 Ute Tribal

**Local Co-ordinate Reference:** 

**TVD Reference:** 

MD Reference:

North Reference: Survey Calculation Method: Well 13-9-4-3-2WH

WELL(5256'+28'= 5284' MSL) @ 5284.00usft

(Pioneer 78 (KB= 28'))

WELL(5256'+28'= 5284' MSL) @ 5284.00usft

(Pioneer 78 (KB= 28'))

True

Minimum Curvature

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
18,500.00 18,600.00	87.05 87.05	359.74 359.74	9,359.58 9,364.73	10,298.50 10,398.36	-766.47 -766.93	10,298.50 10,398.36	0.00 0.00	0.00 0.00	0.00 0.00
18,662.70	87.05 : <b>18663 MD- 93</b>	359.74	9,367.95	10,460.98	-767.21	10,460.98	0.00	0.00	0.00

RECEIVED: August 06, 2013





Database: EDM 5000.1 Lynn Db

Company: NEWFIELD EXPLORATION ROCKY

MOUNTAINS

Project: DUCHESNE COUNTY, UT (NAD 83)

Site: CENTRAL BASIN (NAD 83)

Well: 13-9-4-3-2WH

Wellbore: 13-9-4-3-2WH "UTE TRIBAL"

Design: 13-9-4-3-2WH Rev01 Ute Tribal

**Local Co-ordinate Reference:** 

**TVD Reference:** 

MD Reference:

North Reference: Survey Calculation Method: Well 13-9-4-3-2WH

WELL(5256'+28'= 5284' MSL) @ 5284.00usft

(Pioneer 78 (KB= 28'))

WELL(5256'+28'= 5284' MSL) @ 5284.00usft

(Pioneer 78 (KB= 28'))

True

Design:	13-3-4-3-21	/H Rev01 L	ite i libai						
Design Targets									
Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
SEC. 9, T3S-R2W, S - plan misses tar - Polygon Point 1 Point 2		0.00 973.28usft	0.00 at 0.00usft 0.00 0.00	561.67 MD (0.00 T\ 0.00 143.13	-794.86 /D, 0.00 N, 0.00 3,967.68	7,255,491.45 0.00 E) 7,255,491.45 7,255,695.82	2,025,188.00 2,025,188.00 2,029,152.99	40° 13' 48.231 N	110° 7' 18.549 W
Point 3 Point 4			0.00 0.00	143.13 0.00	3,967.68 0.00	7,255,695.82 7,255,491.45	2,029,152.99 2,025,188.00	•	
Sec. 4, T3S-R2W, - plan misses tar	0.00 get center by		0.00 t at 0.00us	5,512.73 ft MD (0.00 T	-1,454.64 「VD, 0.00 N	7,260,431.73 , 0.00 E)	2,024,451.85	40° 14′ 37.160 N	110° 7' 27.060 W
- Polygon Point 1 Point 2 Point 3 Point 4 Point 5 Point 6 Point 7 Point 8 Point 9 Point 10 Point 11			0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.0	0.00 2,636.94 3,967.55 5,284.00 5,308.24 5,332.56 5,347.84 5,363.18 2,745.45 107.50 47.54 0.00	0.00 -9.16 -11.40 -17.53 1,301.92 2,628.35 3,947.79 5,267.23 5,284.69 5,289.75 2,661.94 0.00	7,260,431.73 7,263,068.22 7,264,398.63 7,265,714.83 7,265,759.44 7,265,804.24 7,265,839.89 7,265,875.60 7,263,258.45 7,260,620.89 7,260,520.37 7,260,431.73	2,024,451.85 2,024,401.97 2,024,379.19 2,024,352.73 2,025,671.65 2,026,997.55 2,028,316.60 2,029,635.64 2,029,693.52 2,029,739.31 2,027,112.73 2,024,451.85		
SEC. 4 & 9, T3S-R2' - plan misses tar - Polygon Point 1 Point 2 Point 3 Point 4 Point 5 Point 6 Point 7 Point 8 Point 9 Point 10			0.00 at 0.00usft  0.00 0.00 0.00 0.00 0.00 0.00 0.00 0	0.00 356.12 1,106.93 4,303.43 5,622.90 7,589.99 8,920.60 9,587.43 9,895.08 9,895.08	-794.86 /D, 0.00 N, 0.00 5.36 16.23 2.38 -2.24 -9.15 -11.43 -14.51 -22.49 -22.49 -14.51	7,255,491.45 7,255,847.61 7,256,598.50 7,259,794.41 7,261,113.65 7,263,080.40 7,264,410.81 7,265,077.52 7,265,385.01 7,265,385.01	2,025,188.00 2,025,188.00 2,025,187.86 2,025,123.93 2,025,098.94 2,025,061.66 2,025,038.84 2,025,025.46 2,025,012.73 2,025,012.73	40° 13' 48.231 N	110° 7' 18.549 W
Point 11 Point 12 Point 13 Point 14 Point 15 Point 16 Point 17 Point 18			0.00 0.00 0.00 0.00 0.00 0.00 0.00	9,587.43 8,920.60 7,589.99 5,622.90 4,303.43 1,106.93 356.12 0.00	-14.31 -11.43 -9.15 -2.24 2.38 16.23 5.36 0.00	7,265,077.52 7,264,410.81 7,263,080.40 7,261,113.65 7,259,794.41 7,256,598.50 7,255,847.61 7,255,491.45	2,025,025.46 2,025,038.84 2,025,061.66 2,025,098.94 2,025,123.93 2,025,187.13 2,025,187.86 2,025,188.00		
Sec. 16, T3S-R2W, - plan misses tar - Polygon Point 1 Point 2 Point 3 Point 4 Point 5 Point 6 Point 7 Point 8	0.00 rget center by		0.00 t at 0.00usi 0.00 0.00 0.00 0.00 0.00 0.00 0.00		-1,459.61 TVD, 0.00 N 0.00 5,291.64 5,420.46 2,788.43 1,486.77 164.15 82.85 0.00	7,255,161.45 ,0.00 E) 7,255,161.45 7,255,365.82 7,250,023.79 7,249,930.27 7,249,888.89 7,249,881.66 7,252,519.04 7,255,161.45	2,024,528.26 2,024,528.26 2,029,817.37 2,030,028.69 2,027,397.79 2,026,096.62 2,024,773.95 2,024,651.92 2,024,528.26	40° 13' 45.070 N	110° 7' 27.120 W





Database: EDM 5000.1 Lynn Db

Company: NEWFIELD EXPLORATION ROCKY

MOUNTAINS

Project: DUCHESNE COUNTY, UT (NAD 83)

Site: CENTRAL BASIN (NAD 83)

Well: 13-9-4-3-2WH

Wellbore: 13-9-4-3-2WH "UTE TRIBAL"

Design: 13-9-4-3-2WH Rev01 Ute Tribal

**Local Co-ordinate Reference:** 

**TVD Reference:** 

MD Reference:

North Reference: Survey Calculation Method: Well 13-9-4-3-2WH

WELL(5256'+28'= 5284' MSL) @ 5284.00usft

(Pioneer 78 (KB= 28'))

WELL(5256'+28'= 5284' MSL) @ 5284.00usft

(Pioneer 78 (KB= 28'))

True

Design:	13-9-4-3-2WH Rev01	Ute Tribal						
SEC. 4 & 9, T3S-F	2W 0.00 0.00	0.00	704.80	3,172.83	7,255,695.82	2,029,153.00	40° 13' 49.643 N	110° 6' 27.389 W
	arget center by 3250.16us	sft at 0.00us	ft MD (0.00 T	VD, 0.00 N,	, 0.00 E)			
- Polygon		0.00	0.00	0.00	7.055.005.00	0.000.450.00		
Point 1		0.00	0.00	0.00	7,255,695.82	2,029,153.00		
Point 2		0.00	304.25	-0.10	7,256,000.03	2,029,148.20		
Point 3		0.00	4,240.43	1.73	7,259,935.77	2,029,089.25		
Point 4		0.00	5,559.90	0.78	7,261,255.07	2,029,067.93		
Point 5		0.00	7,551.27	-2.57	7,263,246.15	2,029,033.84		
Point 6		0.00	9,504.19	-15.22	7,265,198.64	2,028,991.04		
Point 7 Point 8		0.00 0.00	9,851.74 9,851.74	-24.90 -24.90	7,265,546.00 7,265,546.00	2,028,975.99 2,028,975.99		
Point 9		0.00	9,504.19	-24.90 -15.22	7,265,346.00	2,028,991.04		
Point 10		0.00	7,551.27	-13.22	7,263,198.04	2,029,033.84		
Point 10		0.00	5,559.90	0.78	7,261,255.07	2,029,033.84		
Point 12		0.00	4,240.43	1.73	7,259,935.77	2,029,007.93		
Point 13		0.00	304.25	-0.10	7,256,000.03	2,029,148.20		
Point 14		0.00	0.00		7,255,695.82	2,029,153.00		
1 01111 14		0.00	0.00	0.00	7,200,000.02	2,023,133.00		
Sec. 9, T3S-R2W,	0.00 0.00	0.00	241.90	-1,459.61	7,255,161.45	2,024,528.26	40° 13′ 45.070 N	110° 7' 27.120 W
	arget center by 1479.52us	sft at 0.00us	ft MD (0.00 T	VD, 0.00 N,	, 0.00 E)			
- Polygon								
Point 1		0.00	0.00	0.00	7,255,161.45	2,024,528.26		
Point 2		0.00	1,429.77	21.03	7,256,591.38	2,024,527.21		
Point 3		0.00	5,270.83	4.97	7,260,431.73	2,024,451.85		
Point 4		0.00	5,318.37	2,666.91	7,260,520.36	2,027,112.73		
Point 5		0.00	5,378.33	5,294.72	7,260,620.89	2,029,739.31		
Point 6		0.00	122.68	5,291.64	7,255,365.82	2,029,817.37		
SEC2. 4, T3S-R2V	V, € 0.00 → 0.00	0.00	10,456.75	-817.34	7,265,385.00	2,025,012.74	40° 15′ 26.020 N	110° 7' 18.843 W
	arget center by 9355.47us							
- Polygon			•			,		
Point 1		0.00	0.00	0.00	7,265,385.00	2,025,012.74		
Point 2		0.00	34.26	659.87	7,265,429.45	2,025,672.00		
Point 3		0.00	58.57	1,986.40	7,265,474.23	2,026,997.99		
Point 4		0.00	73.85	3,305.79	7,265,509.88	2,028,316.99		
Point 5		0.00	99.79	3,965.27	7,265,546.00	2,028,975.99		
Point 6		0.00	99.79	3,965.27	7,265,546.00	2,028,975.99		
Point 7		0.00	73.85	3,305.79	7,265,509.88	2,028,316.99		
Point 8		0.00	58.57	1,986.40	7,265,474.23	2,026,997.99		
Point 9		0.00	34.26	659.87	7,265,429.45	2,025,672.00		
Point 10		0.00	0.00	0.00	7,265,385.00	2,025,012.74		
Top Production (1:	3-9- 0.00 359.20	8,846.00	563.50	-744.85	7,255,494.05	2,025,237.96	40° 13′ 48.249 N	110° 7' 17.904 W
- plan misses t	arget center by 164.53usf des W0.00 H0.00 D1,500.	t at 8833.21					40 10 40.2431	110 7 17.50 <del>4</del> W
σ .	•	•						
Pt1 (13-9-4-3-2W - plan misses t - Point	(H) 0.00 0.00 arget center by 0.45usft a	9,114.00 t 13722.14u	5,527.00 sft MD (9113	-744.52 3.69 TVD, 55	7,260,456.97 527.02 N, -744.85	2,025,161.66 5 E)	40° 14' 37.301 N	110° 7' 17.902 W
TD-PBHL (13-9-4-		9,368.00		-767.27	7,265,390.00	2,025,062.74	40° 15′ 26.062 N	110° 7' 18.197 W
<ul><li>plan misses t</li><li>Point</li></ul>	arget center by 0.08usft a	t 18662.70u	ısft MD (9367	'.95 TVD, 10	0460.98 N, -767.2	21 E)		





EDM 5000.1 Lynn Db Database:

**NEWFIELD EXPLORATION ROCKY** Company:

**MOUNTAINS** 

Project: DUCHESNE COUNTY, UT (NAD 83)

Site: CENTRAL BASIN (NAD 83)

Well: 13-9-4-3-2WH

Wellbore: 13-9-4-3-2WH "UTE TRIBAL" Design: 13-9-4-3-2WH Rev01 Ute Tribal **Local Co-ordinate Reference:** 

**TVD Reference:** 

MD Reference:

North Reference:

**Survey Calculation Method:** 

Well 13-9-4-3-2WH

WELL(5256'+28'= 5284' MSL) @ 5284.00usft

(Pioneer 78 (KB= 28'))

WELL(5256'+28'= 5284' MSL) @ 5284.00usft

(Pioneer 78 (KB= 28'))

Formations						
	Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)
	3,657.56	3,637.00	Green River Formation		0.00	0.00
	5,681.70	5,636.00	Trona		0.00	0.00
	5,727.26	5,681.00	Mahogany Bench		0.00	0.00
	6,632.50	6,575.00	Garden Gulch Member		0.00	0.00
	6,910.96	6,850.00	Garden Gulch Member-1		0.00	0.00
	7,097.27	7,034.00	Garden Gulch Member-2		0.00	0.00
	7,891.43	7,820.05	Douglas Creek Member		2.95	0.00
	8,300.00	8,228.37	B Limestone	71	2.95	0.00
	8,435.00	8,363.37	Lower Black Shale		2.95	0.00
	8,582.53	8,510.64	Castle Peak Limestone		2.95	0.00
	8,757.17	8,672.80	CP LIMES_2	\>	2.95	0.00
	8,944.42	8,803.60	Uteland Butte		2.95	0.00
	8,965.92	8,814.55	U.B A		2.95	0.00
	9,000.44	8,830.14	U.B B		2.95	0.00
	9,136.18	8,865.85	U.B C_Land Pt (84.05°)		2.95	0.00

Plan Annotations				
Measured Depth (usft)	Vertical Depth (usft)	Local Cod +N/-S (usft)	ordinates +E/-W (usft)	Comment
1,500.00	1,500.00	0.00	0.00	Tangent= 100 ft. at 1500 MD-TVD
1,600.00	1,600.00	0.00	0.00	Nudge KOP- Build Rate= 1.50/100' MD
2,202.57	2,200.07	28.82	-37.67	EOB-Tangent= 5367 ft at 2203 MD
7,569.06	7,499.93	541.18	-707.18	Nudge Drop Rate= -1.50/100' MD
8,171.63	8,100.00	570.00	-744.85	Nudge Vert. Pt.= 8172 MD- 8100 TVD
8,431.63	8,360.00	570.00	-744.85	Top Lower Black Shale-Start 50 ft Tangent
8,481.63	8,410.00	570.00	-744.85	Casing-Start 35 ft. Tangnent
8,516.63	8,445.00	570.00	-744.85	Curve KOP-Build Rate= 13.54°/100' MD
9,137.56	8,866.00	949.40	-744.85	Land Pt. (84.05°) 9138 MD- 8866 TVD
9,312.56	8,884.14	1,123.46	-744.85	Curve Build Rate= 3.00°/100' MD
9,412.56	8,891.90	1,223.15	-744.85	Land Pt. Horz Tgt (87.05°) 9413 MD- 8992 TVD
13,722.12	9,113.69	5,527.00	-744.85	Turn DLS= 2.00/100' MD- TFO -90.01
13,735.11	9,114.36	5,539.97	-744.88	EOT-Tangent= 4928 ft. at 13735 MD
18,662.70	9,367.95	10,460.98	-767.21	TD-PBHL= 18663 MD- 9368 TVD

# AFFIDAVIT OF EASEMENT, RIGHT-OF-WAY AND SURFACE USE AGREEMENT

<u>Peter Burns</u> personally appeared before me, being duly sworn, deposes and with respect to State of Utah R649-3-34.7 says:

- 1. My name is <u>Peter Burns</u>. I am a Landman for Newfield Production Company, whose address is 1001 17<sup>th</sup> Street, Suite 2000, Denver, CO 80202 ("Newfield").
- 2. Newfield is the Operator of the proposed <u>UT 3-16-3-2WH</u> well with a surface location to be positioned in the <u>NENW</u> of Section <u>16</u>, Township <u>3</u> South, Range <u>2</u> West (the "Drillsite Location"), and a bottom hole location to be positioned in the <u>SESW</u> of Section <u>16</u>, Township <u>3</u> South, Range <u>2</u> West, <u>Duchesne County, Utah</u>. The surface owner of the Drillsite Location is <u>Murray Sheep Ranch, LLC</u>, whose address is <u>P.O. Box 96</u>, <u>Myton, UT 84052</u> ("Surface Owner").
- 3. Newfield and the Surface Owner have agreed upon an Easement, Right-of-Way and Surface Use Agreement dated October 3, 2012 covering the Drillsite Location and access to the Drillsite Location.

FURTHER AFFIANT SAYETH NOT.

Peter Burns

**ACKNOWLEDGEMENT** 

STATE OF COLORADO

§

COUNTY OF DENVER

8

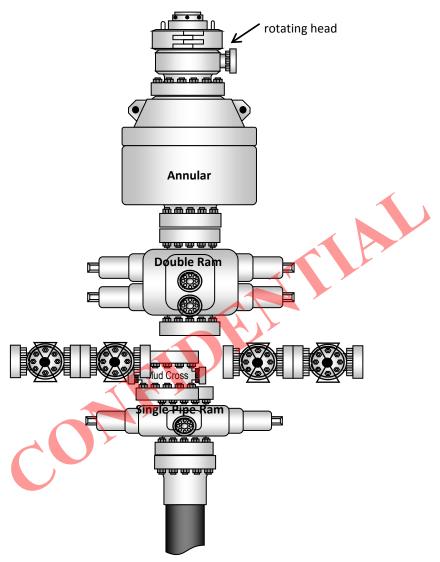
Before me, a Notary Public, in and for the State, on this <u>15th</u> day of <u>November, 2012</u>, personally appeared <u>Peter Burns</u>, to me known to be the identical person who executed the foregoing instrument, and acknowledged to me that <u>he</u> executed the same as <u>his</u> own free and voluntary act and deed for the uses and purposes therein set forth.

**NOTARY PUBLIC** 

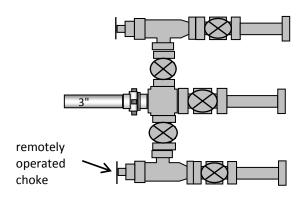
My Commission Expires:

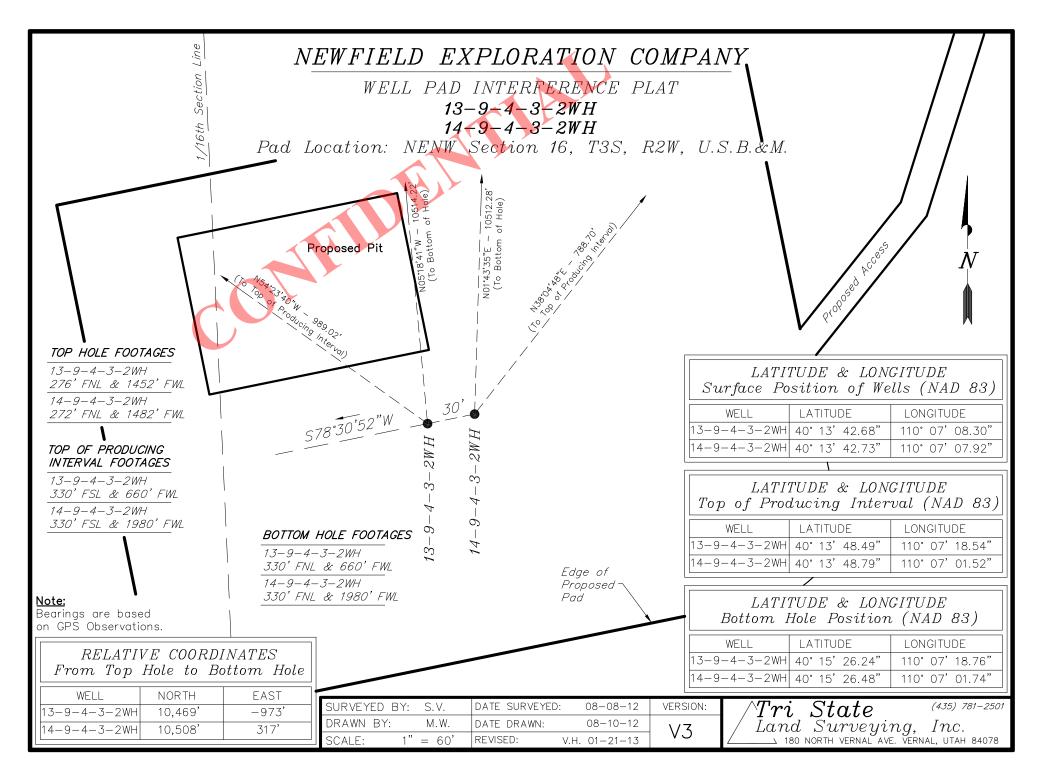


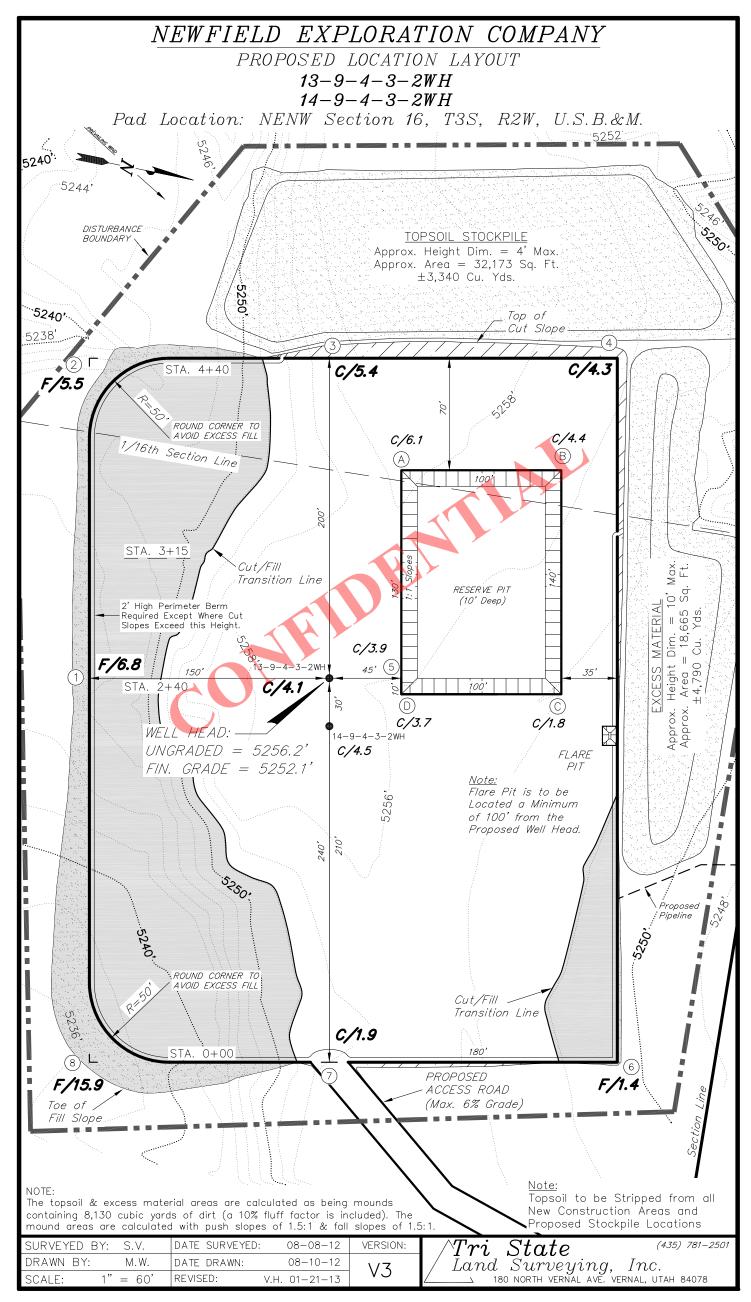
**Typical 10M BOP stack configuration** 

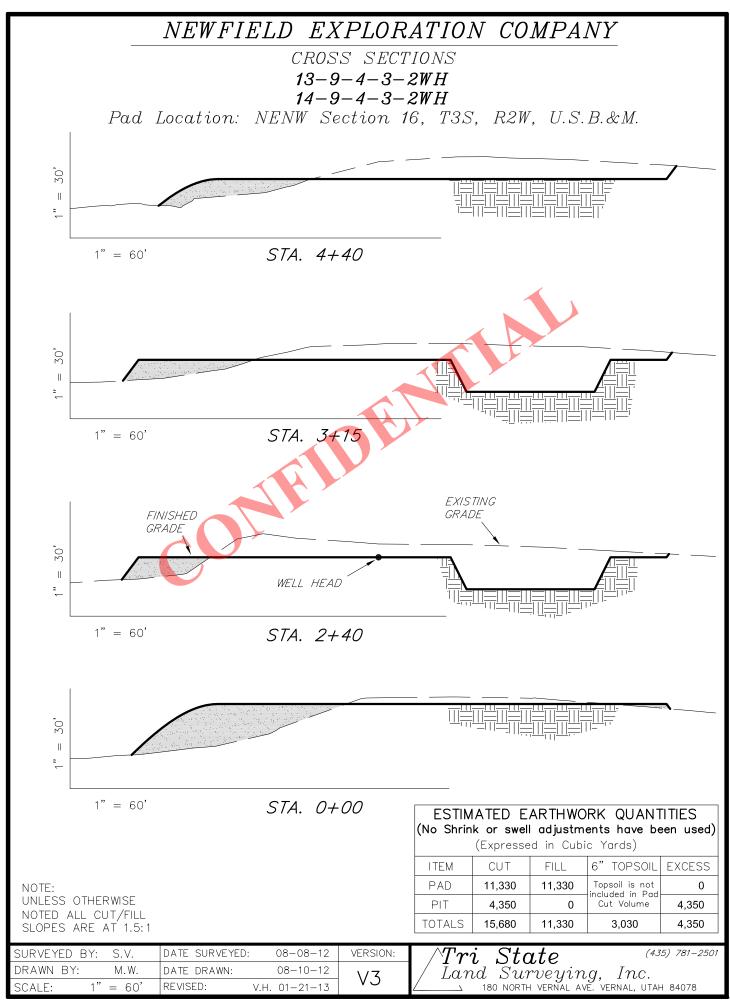


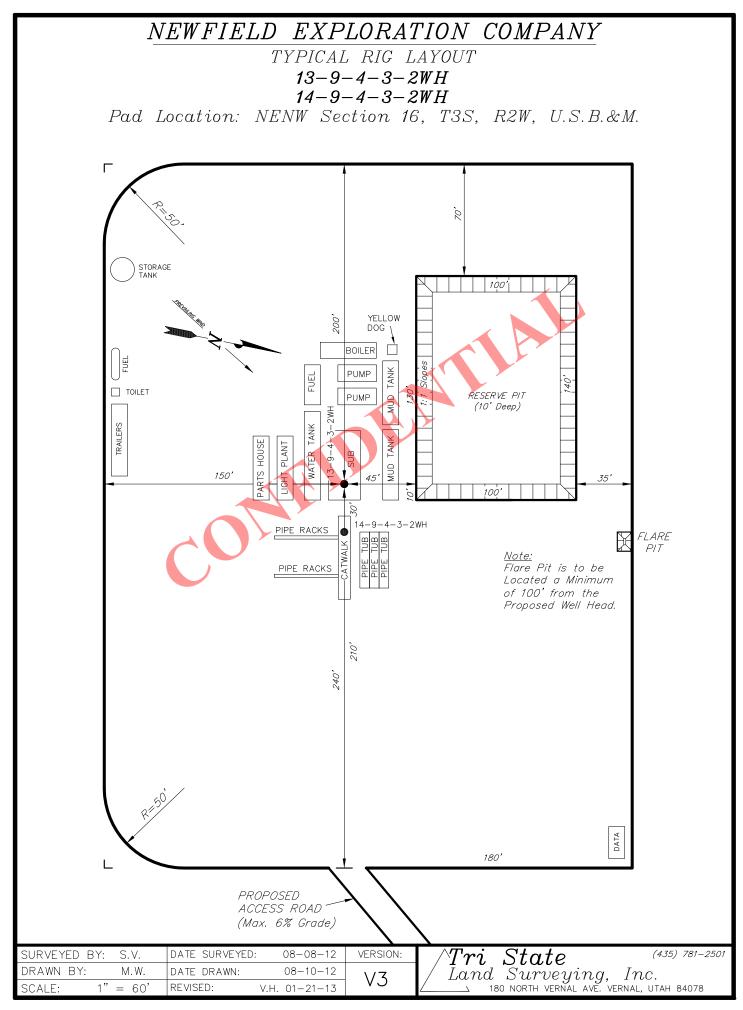
Typical 10M choke manifold configuration

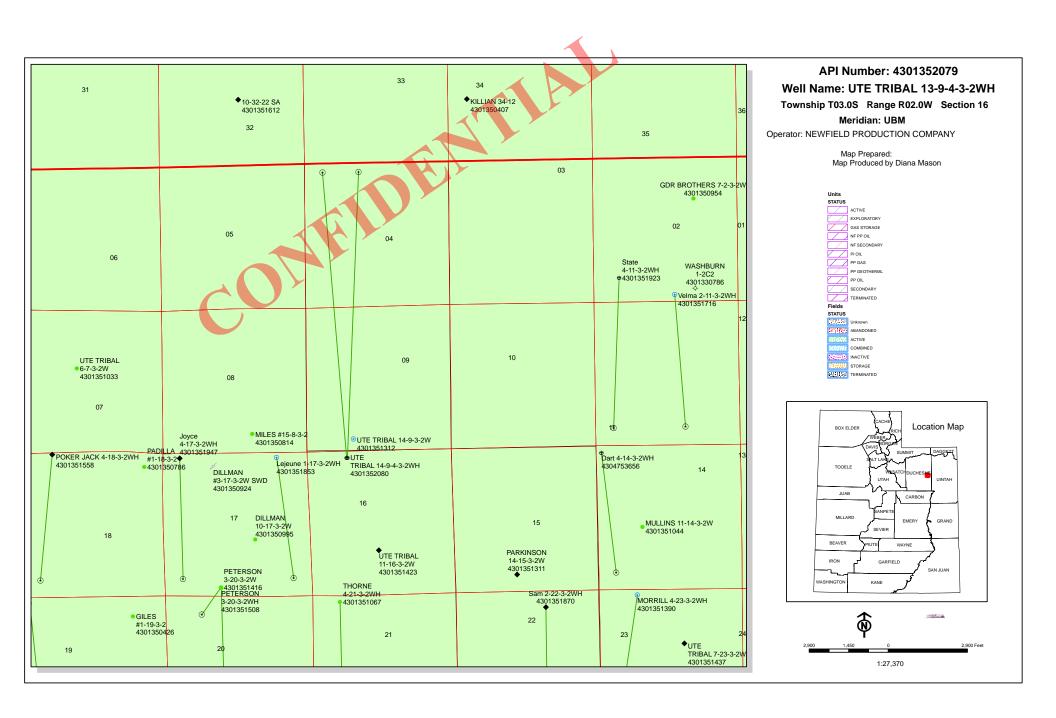














# **Newfield Exploration Company**

1001 17th Street | Suite 2000 Denver, Colorado 80202 PH 303-893-0102 | FAX 303-893-0103

June 4, 2013

State of Utah Division of Oil, Gas & Mining ATTN: Brad Hill PO Box 145801 Salt Lake City, UT 84114

RE:

Ute Tribal 13-9-4-3-2WH

Township 3 South, Range 2 West, Sections 9 & 4

Duchesne County, Utah

Dear Mr. Hill:

Newfield Production Company ("Newfield") proposes to drill the Ute Tribal 13-9-4-3-2WH from a surface location of 276' FNL and 1452' FWL of Section 16, T3S-R2W, to a bottom hole location of 330'FNL and 660'FWL of Section 4, T3S-R2W.

The Ute Tribal 13-9-4-3-2WH is covered by Order No. 139-98, which requires no portion of the producing interval of the horizontal lateral be closer than 330' from the northern or southern section boundaries and no closer than 660' from the eastern or western section boundaries, and requires proper surface and subsurface authorization be obtained when the surface location is located off of the drilling unit.

In compliance with the above referenced Order, the top of the uppermost producing zone of the Ute Tribal 13-9-4-3-2WH is 330' FSL and 660' FWL of T3S-R2W Section 9. Newfield shall case and cement the Ute Tribal 13-9-4-3-2WH from the surface location to the point where the wellbore reaches the legal setback, and the wellbore will only be completed within the legal setback. In the event the horizontal drifts west, outside of the 660' FWL setback of Sections 9 & 4, T3S-R2W, Newfield will attempt to acquire consent from all owners in Sections 5 & 8 of T3S-R2W and shall file the appropriate application with the State.

In further compliance of the above referenced Order, Newfield has obtained authorization from the surface owner of the drilling location, as is evidenced by the Affidavit of Easement, Right-of-Way and Surface Use Agreement attached to the APD. Newfield and its partners are leasehold owners of minerals underlying the surface location and all that portion of the wellbore of the Ute Tribal 13-9-4-3-2WH.

Based on Newfield's compliance with the requirements of Order No. 139-98, Newfield respectfully requests the approval of our APD for the Ute Tribal 13-9-4-3-2WH.

Should you have questions or require further information, please do not hesitate to contact the undersigned at 303-383-4197 or by email at sgillespie@newfield.com. Your consideration of this matter is greatly appreciated.

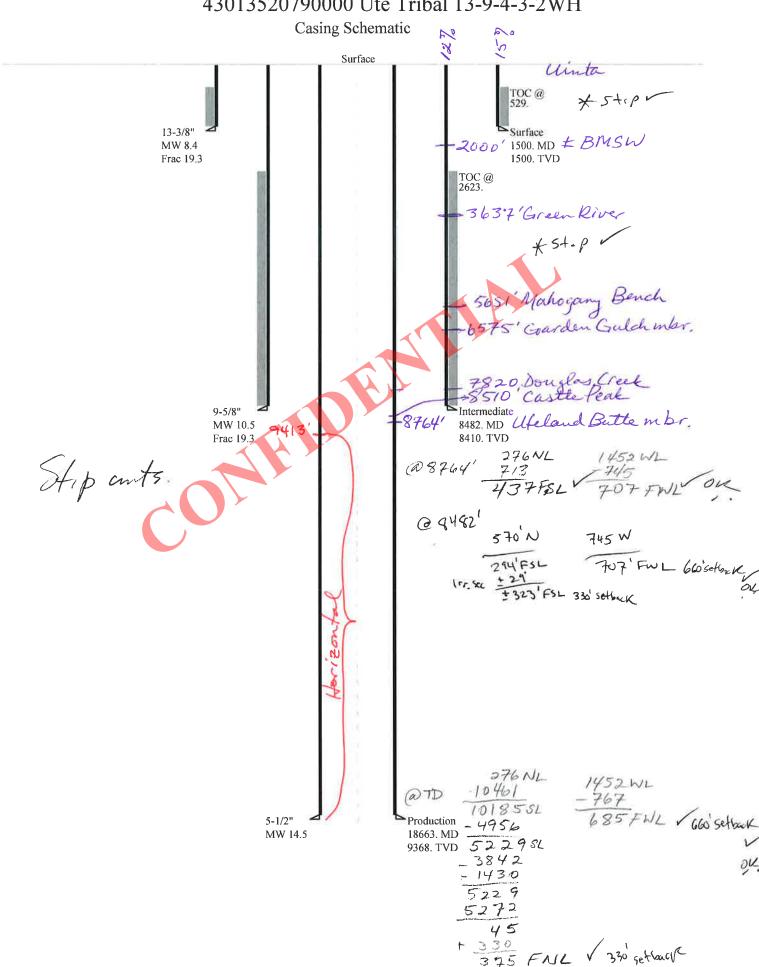
My Regards,

Landman

#### BOPE REVIEW NEWFIELD PRODUCTION COMPANY UTE TRIBAL 13-9-4-3-2WH 43013520790000

Well Name	NEWFIELD PRODUCTION COMPANY UTE TRIBAL				L 13-	9-4-3-2WH 4	30	
String	COND SURF 11			i [[	PROD	Ī		
Casing Size(")		20.000	13.375	9.675	i [	5.500	Ī	
Setting Depth (TVD)		60	1500	8410	i [	9368	Ī	
Previous Shoe Setting Dept	h (TVD)	0	60	1500	Ĭ.	8410	Ī	
Max Mud Weight (ppg)		8.3	8.4	10.0	i [	14.0	Ī	
BOPE Proposed (psi)		0	500	5000	Ĭ [	5000	Ī	
Casing Internal Yield (psi)		1000	2730	5750	ĬŢ.	12360	1	
Operators Max Anticipated	Pressure (psi)	6056			i [	12.4		
Calculations		COND Str	ing			20.000	"	
Max BHP (psi)		.0	52*Setting D	Depth*MW=	26	5		
					Ė		BOPE Ade	quate For Drilling And Setting Casing at Depth?
MASP (Gas) (psi)		Max BH	P-(0.12*Setti	ing Depth)=	19	)	NO	
MASP (Gas/Mud) (psi)		Max BH	P-(0.22*Setti	ing Depth)=	13		NO	
					L		*Can Full	Expected Pressure Be Held At Previous Shoe?
Pressure At Previous Shoe		etting Depth	- Previous Sh	noe Depth)=	13		NO	
Required Casing/BOPE Tes					60		psi	
*Max Pressure Allowed @ 1	Previous Casing	Shoe=			0		psi *Ass	sumes 1psi/ft frac gradient
Calculations		SURF Str	ing			13.375	"	
Max BHP (psi)	.052*Setting Depth*MW=					5		
							BOPE Ade	quate For Drilling And Setting Casing at Depth?
MASP (Gas) (psi)			P-(0.12*Setti		47	'5	YES	diverter
MASP (Gas/Mud) (psi)		Max BH	P-(0.22*Setti	ing Depth)=	32	!5	YES	ОК
Durane AA Duraniana Char	M DHD 22*C	William Donath	Durania ara Cil	D(b.)	H			Expected Pressure Be Held At Previous Shoe?
Pressure At Previous Shoe Required Casing/BOPE Tes		etting Deptin	- Previous Si	ide Deptii)=	33		NO noi	ОК
*Max Pressure Allowed @		Shoe-			15		psi *Ass	sumes 1psi/ft frac gradient
max i ressure Anowed &	rievious casing i	SHUC-			60		psi 1133	numes 1psi/it frac gradient
Calculations		I1 Strin	ıg			9.675	"	
Max BHP (psi)		.0	52*Setting D	Depth*MW=	43	173		
MAGD (G ) ( D)		14 DY	D (0.10±0	. 5 .1)	L		BOPE Ade	quate For Drilling And Setting Casing at Depth?
MASP (Gas) (psi)			P-(0.12*Setti		33		YES	5M BOPE, 2 ram preventers, annular
MASP (Gas/Mud) (psi)		мах вн	P-(0.22*Setti	ing Depth)=	25	23	*Con Full	preventer, 5M choke manifold  Expected Pressure Be Held At Previous Shoe?
Pressure At Previous Shoe	Max BHP22*(S	etting Depth	- Previous Sh	noe Depth)=	28	152	NO I	OK
Required Casing/BOPE Tes	<u> </u>	0 1		1 /	H	25	psi	OK
*Max Pressure Allowed @ Previous Casing Shoe=						500		sumes 1psi/ft frac gradient
Calculations	lations PROD String					5.500	"	
Max BHP (psi)	.052*Setting Depth*MW=				68			
	5 .				,		BOPE Ade	quate For Drilling And Setting Casing at Depth?
MASP (Gas) (psi)	Max BHP-(0.12*Setting Depth)=				56	96	NO	5M BOPE, 2 ram preventers, annular
MASP (Gas/Mud) (psi)	Max BHP-(0.22*Setting Depth)=				47	759	YES	preventer, 5M choke manifold
							*Can Full	Expected Pressure Be Held At Previous Shoe?
Pressure At Previous Shoe	Max BHP22*(S	etting Depth	- Previous Sh	noe Depth)=	66	09	YES	ОК
Required Casing/BOPE Tes	st Pressure=				50	000	psi	
*Max Pressure Allowed @ Previous Casing Shoe=						50	psi *Ass	sumes 1psi/ft frac gradient

# 43013520790000 Ute Tribal 13-9-4-3-2WH



Well name:

43013520790000 Ute Tribal 13-9-4-3-2WH

Operator:

**NEWFIELD PRODUCTION COMPANY** 

Project ID:

String type:

Surface

43-013-52079

Location:

DUCHESNE COUNTY

Design parameters: Collapse

Mud weight: 8.400 ppg Design is based on evacuated pipe.

Minimum design factors:

Collapse:

Design factor 1.125 **Environment:** 

H2S considered? Surface temperature:

No 75 °F

Bottom hole temperature: Temperature gradient:

96 °F

1.40 °F/100ft

Minimum section length: 1,000 ft

**Burst:** Design factor

1.00

1.80 (J) 1.80 (J)

1,314 ft

Cement top:

529 ft

**Burst** 

Max anticipated surface

No backup mud specified.

pressure: Internal gradient: Calculated BHP

1,320 psi 0.120 psi/ft

1,500 psi

Body yield:

Neutral point:

Tension:

8 Round STC: 8 Round LTC:

1.60 (J) Buttress: Premium: 1.50 (J)

1.60 (B)

Tension is based on buoyed weight.

Non-directional string.

Re subsequent strings:

Next setting depth: Next mud weight:

8.410 ft 10.500 ppg 4,587 psi

Next setting BHP: Fracture mud wt: Fracture depth:

19.250 ppg 1,500 ft

Injection pressure:

1,500 psi

Run	Segment		Nominal		End	True Vert	Measured	Drift	Est.
Seq	Length	Size	Weight	Grade	Finish	Depth	Depth	Diameter	Cost
	(ft)	(in)	(lbs/ft)			(ft)	(ft)	(in)	(\$)
1	1500	13.375	54.50	J-55	ST&C	1500	1500	12.49	18611
Run	Collapse	Collapse	Collapse	Burst	Burst	Burst	Tension	Tension	Tension
Seq	Load	Strength	Design	Load	Strength	Design	Load	Strength	Design
	(psi)	(psi)	Factor	(psi)	(psi)	Factor	(kips)	(kips)	Factor
1	655	1130	1.727	1500	2730	1.82	71.6	514	7.18 J

Prepared

Helen Sadik-Macdonald

Div of Oil, Gas & Mining by:

Phone: 801.538.5357 FAX: 501.359.3940

Date: July 31,2013 Salt Lake City, Utah

Remarks:

Collapse is based on a vertical depth of 1500 ft, a mud weight of 8.4 ppg The casing is considered to be evacuated for collapse purposes. Collapse strength is based on the Westcott, Dunlop & Kemler method of biaxial correction for tension.

Burst strength is not adjusted for tension.

Well name:

43013520790000 Ute Tribal 13-9-4-3-2WH

Operator:

**NEWFIELD PRODUCTION COMPANY** 

String type:

Intermediate

Project ID: 43-013-52079

Location:

**DUCHESNE COUNTY** 

Minimum design factors: **Environment:** 

1.125

Collapse

Design parameters:

Mud weight: 10.500 ppg Internal fluid density: 4.230 ppg Collapse: Design factor H2S considered?

Surface temperature: Bottom hole temperature:

75 °F 193 °F 1.40 °F/100ft

Temperature gradient: Minimum section length: 1,000 ft

No

Burst:

Design factor

1.00

1.80 (J)

1.80 (J)

Cement top:

2,623 ft

**Burst** 

Max anticipated surface

pressure: Internal gradient: Calculated BHP

Annular backup:

4,995 psi 0.220 psi/ft 6,846 psi

2.50 ppg Buttress:

Body yield:

Tension:

8 Round STC: 8 Round LTC:

1.60 (J) Premium: 1.50 (J) 1.60 (B)

Tension is based on buoyed weight. Neutral point: 7,161 ft

Directional well information:

Kick-off point 8517 ft Departure at shoe: 938 ft Maximum dogleg: 1.5 °/100ft 0° Inclination at shoe:

Re subsequent strings:

Next setting depth: 9,368 ft Next mud weight: 14.500 ppg Next setting BHP: 7,056 psi Fracture mud wt: 19.250 ppg Fracture depth: 8,410 ft Injection pressure: 8,410 psi

Run	Segment		Nominal		End	True Vert	Measured	Drift	Est.
Seq	Length	Size	Weight	Grade	Finish	Depth	Depth	Diameter	Cost
	(ft)	(in)	(lbs/ft)			(ft)	(ft)	(in)	(\$)
1	8482	9.625	40.00	N-80	Buttress	8410	8482	8.75	115489
Run	Collapse	Collapse	Collapse	Burst	Burst	Burst	Tension	Tension	Tension
Seq	Load	Strength	Design	Load	Strength	Design	Load	Strength	Design
	(psi)	(psi)	Factor	(psi)	(psi)	Factor	(kips)	(kips)	Factor
1	2739	3090	1.128	5753	5750	1.00	283.9	916.3	3.23 B

Prepared by: Helen Sadik-Macdonald Div of Oil, Gas & Mining

Phone: 801.538.5357 FAX: 501.359.3940

Date: July 31,2013 Salt Lake City, Utah

Remarks:

Collapse is based on a vertical depth of 8410 ft, a mud weight of 10.5 ppg. An internal gradient of .22 psi/ft was used for collapse from TD to Collapse strength is based on the Westcott, Dunlop & Kemler method of biaxial correction for tension.

Burst strength is not adjusted for tension.

Collapse strength is (biaxially) derated for doglegs in directional wells by multiplying the tensile stress by the cross section area to calculate a

Well name:

43013520790000 Ute Tribal 13-9-4-3-2WH

Operator:

**NEWFIELD PRODUCTION COMPANY** 

String type:

Project ID:

Production

43-013-52079

Location:

**DUCHESNE COUNTY** 

Design parameters:

Max anticipated surface

No backup mud specified.

pressure:

Internal gradient:

Calculated BHP

**Collapse** 

**Burst** 

Mud weight: Design is based on evacuated pipe.

14.500 ppg

Minimum design factors: Collapse: Design factor 1.125 **Environment:** 

H2S considered? Surface temperature: No 75 °F

Bottom hole temperature: Temperature gradient:

206 °F 1.40 °F/100ft

Minimum section length: 1,000 ft

Burst:

Design factor

1.00

4,995 psi 0.220 psi/ft

7,056 psi

Tension:

Load

(psi)

7056

8 Round STC: 8 Round LTC: Buttress:

Premium: Body yield: Directional Info - Build & Hold

Drift

Diameter

(in)

4.653

**Tension** 

Kick-off point Departure at shoe:

Measured

Depth

(ft)

8517 ft 10490 ft

Maximum dogleg: Inclination at shoe: 13.54 °/100ft 87.05°

1.60 (B)

1.80 (J)

1.80 (J)

1.60 (J)

1.50 (J)

Tension is based on buoyed weight. Neutral point: 7,378 ft

12360

Run Segment Nominal End True Vert Length Weight Seq Size Grade **Finish** (ft) (in) (lbs/ft) 1 18663 5.5 20.00 P-110 **Buttress** Burst

Collapse Collapse Run Collapse Seq Load Strength Design (psi) (psi) **Factor** 1 7056 11100 1.573

9368 18663 Burst **Burst** Tension Strength Design (psi) **Factor** 

1.75

Depth

(ft)

Load Strength (kips) (kips) 146.2 641.1

Design **Factor** 4.38 B

Est.

Cost

(\$)

**Tension** 

154832

Helen Sadik-Macdonald Prepared Div of Oil, Gas & Mining

Phone: 801.538.5357 FAX: 501.359.3940

Date: July 17,2013 Salt Lake City, Utah

Remarks:

Collapse is based on a vertical depth of 9368 ft, a mud weight of 14.5 ppg. The casing is considered to be evacuated for collapse purposes. Collapse strength is based on the Westcott, Dunlop & Kemler method of biaxial correction for tension.

Burst strength is not adjusted for tension.

Collapse strength is (biaxially) derated for doglegs in directional wells by multiplying the tensile stress by the cross section area to calculate a

## **ON-SITE PREDRILL EVALUATION**

## Utah Division of Oil, Gas and Mining

**Operator** NEWFIELD PRODUCTION COMPANY

Well Name UTE TRIBAL 13-9-4-3-2WH

API Number 43013520790000 APD No 7766 Field/Unit WILDCAT

Location: NENW Sec 16 Tw 3.0S Rng 2.0W 276 FNL 1452 FWL

1/4,1/4

GPS Coord (UTM) 574953 4453494 Surface Owner Murray Sheep Ranch, LLC - Dallas Murphy

## **Participants**

J. Burns - Starpoint; M.Crozier, C.Miller - NFX

## Regional/Local Setting & Topography

This location is within what is called by the operator the Central Basin Unit in Duchesne County below the North Myton Bench. Highway 40 between Roosevelt and Myton is 2.5 miles East. The surrounding topography is hilly with capstones and eroded terraces with slopes >2%. The soils are Sandy with a good portion of silts consistent with floodplain profiles. Much of the surrounding lands are used for farming and have seen development for petroleum extraction. The location has not however, seen recent development and most of the property is undisturbed. Plant populations of Big sage, Rabbitbrush and Opuntia spp were noted on site. The site is situated below the North and South lateral canals. The Flattop Butte and Dry Gulch Canal, can all be found within a one mile radius. A ditch (drawn on a 7.5 minute quad map) is constructed across location conveying flows from the bench above in an arch to a rather large stock pond that one corner of the pad will disturb

## Surface Use Plan

Current Surface Use

Grazing

New Road
Miles

Well Pad

Src Const Material

Surface Formation

0.1 Width 360 Length 440 Onsite UNTA

**Ancillary Facilities** 

## Waste Management Plan Adequate?

## **Environmental Parameters**

Affected Floodplains and/or Wetlands N

## Flora / Fauna

High desert shrubland ecosystem. Expected vegetation consists of black sagebrush, shadscale, Atriplex spp., mustard spp, rabbit brush, horsebrush, broom snakeweed, Opuntia spp and spring annuals.

Dominant vegetation;

Mat Atriplex and Galleta

Wildlife;

Adjacent habitat contains forbs that may be suitable browse for deer, antelope, prairie dogs or rabbits, though none were observed.

RECEIVED: September 10, 2013

DWR did not respond with comment / issues

## Soil Type and Characteristics

clays with some gravels

**Erosion Issues** Y

**Sedimentation Issues** Y

Site Stability Issues N

## **Drainage Diverson Required?** Y

care to be taken to avoid stock pond

Berm Required? Y

Erosion Sedimentation Control Required? N

Paleo Survey Run? N Paleo Potental Observed? N Cultural Survey Run? N Cultural Resources? N

## Reserve Pit

Site-Specific Factors	Site Ran	king	
Distance to Groundwater (feet)	75 to 100	10	
Distance to Surface Water (feet)		20	
Dist. Nearest Municipal Well (ft)	>5280	0	
Distance to Other Wells (feet)		20	
Native Soil Type	Mod permeability	10	
Fluid Type	Oil Base Mud Fluid	15	
Drill Cuttings	Normal Rock	0	
<b>Annual Precipitation (inches)</b>	10 to 20	5	
Affected Populations			
Presence Nearby Utility Conduits	Present	15	
	Final Score	95	1 Sensitivity Level

## Characteristics / Requirements

Operator intends to use an oil based drilling mud and is therefore required to use a closed loop system. If a reserve pit and freshwater is used, Pit to be dug to a depth of 8'. Because of the likely hood of disturbance to existing sandstone bedrock, pit underlayment is to be used to protect the liner from potential puncture. Pit should be fenced to prevent entry by deer, other wildlife and domestic animals. Pit to be closed within one year after drilling activities are complete.

Closed Loop Mud Required? Y Liner Required? Liner Thickness Pit Underlayment Required?

## Other Observations / Comments

Newfield agreed to construct a new road for Mr Murray to replace the one that will be destroyed by the placement of the pad

RECEIVED: September 10, 2013

Chris Jensen **Evaluator** 

4/3/2013 **Date / Time** 

# Application for Permit to Drill Statement of Basis

## Utah Division of Oil, Gas and Mining

APD No	API WellNo	Status	Well Type	Surf Owner	CBM
7766	43013520790000	LOCKED	OW	P	No
Operator	NEWFIELD PRODUCTION	N COMPANY	Surface Owner-APD	Murray Sheep R - Dallas Murphy	
Well Name	UTE TRIBAL 13-9-4-3-2	2WH	Unit		
Field	WILDCAT		Type of Work	DRILL	
Location		U 276 FNL 3499N	1452 FWL GPS	Coord	

## **Geologic Statement of Basis**

Newfield proposes to set 60' of conductor and 2,500' of surface casing at this location. The base of the moderately saline water at this location is estimated to be at a depth of 2,000'. A search of Division of Water Rights records shows 6 water wells within a 10,000 foot radius of the center of Section 16. All wells are located over a mile from the proposed location. All wells are privately owned. Depth is listed as ranging from 65 to 142 feet. Average depth is less than 100 feet. Water use is listed as irrigation, stock watering, and domestic use. The surface formation at this site is the Uinta Formation. The Uinta Formation is made up of interbedded shales and sandstones. The sandstones are mostly lenticular and discontinuous and should not be a significant source of useable ground water. The proposed surface casing should adequately protect useable ground water in this area.

Brad Hill 4/16/2013
APD Evaluator Date / Time

## **Surface Statement of Basis**

Location is proposed in a good location although outside the spacing window typical of a horizontal well. Access road enters the pad from the North. The landowner was in attendance for the pre-site inspection.

The soil type and topography at present do combine to pose a small threat to erosion or sediment/pollution transport in these regional climate conditions.

Usual construction standards of the Operator appear to be adequate for the proposed purpose as submitted. Operator has plans to use a closed loop system an oil based mud not indicated on plans.

I recognize no special flora or animal species or cultural resources on site that the proposed action may harm. The location was previously surveyed for cultural and paleontological resources as the operator saw fit. I have advised the operator take all measures necessary to comply with ESA and MBTA and that actions insure no disturbance to species that may have not been seen during onsite visit.

The location should be bermed to prevent fluids from entering or leaving the confines of the pad. Fencing around the reserve pit will be necessary to prevent wildlife and livestock from entering. A synthetic liner of 16 mils (minimum) should be utilized in the reserve pit. Measures (BMP's) shall be taken to protect steep slopes and topsoil pile from erosion, sedimentation and stability issues. A diversion is to be built sufficient to conduct overland or channel flow according to plans submitted. Newfield Personnel promised to construct a road for landowners use as existing road will be destroyed

RECEIVED: September 10, 2013

Chris Jensen 4/3/2013
Onsite Evaluator Date / Time

## Conditions of Approval / Application for Permit to Drill

Category Condition

Pits A closed loop mud circulation system is required for this location.

Surface The well site shall be bermed to prevent fluids from leaving the pad.

Surface Drainages adjacent to the proposed pad shall be diverted around the location. Stock pond is not to

be disturbed

Surface The reserve pit shall be fenced upon completion of drilling operations.

Surface Measures (BMP's) shall be taken to protect steep slopes and topsoil pile from erosion, sedimentation

and stability issues.

Surface A new access road to be construct to replace an existing road to be destroyed by drilling operations



## **WORKSHEET** APPLICATION FOR PERMIT TO DRILL

**APD RECEIVED:** 3/6/2013 API NO. ASSIGNED: 43013520790000 WELL NAME: UTE TRIBAL 13-9-4-3-2WH **OPERATOR:** NEWFIELD PRODUCTION COMPANY (N2695) PHONE NUMBER: 435 719-2018 **CONTACT:** Don Hamilton PROPOSED LOCATION: NENW 16 030S 020W Permit Tech Review: SURFACE: 0276 FNL 1452 FWL Engineering Review: Geology Review: BOTTOM: 0330 FNL 0660 FWL **COUNTY: DUCHESNE LATITUDE**: 40.22857 **LONGITUDE:** -110.11900 UTM SURF EASTINGS: 574951.00 NORTHINGS: 4453499.00 FIELD NAME: WILDCAT LEASE TYPE: 2 - Indian **LEASE NUMBER: 1420H626269** PROPOSED PRODUCING FORMATION(S): GREEN RIVER SURFACE OWNER: 4 - Fee **COALBED METHANE: NO RECEIVED AND/OR REVIEWED: LOCATION AND SITING:** R649-2-3. Bond: INDIAN - WYB000493 Unit: **Potash** R649-3-2. General Oil Shale 190-5 R649-3-3. Exception Oil Shale 190-3 **Drilling Unit** Oil Shale 190-13 Board Cause No: Cause 139-98 Water Permit: 437478

**Effective Date:** 12/14/2012

R649-3-11. Directional Drill

Siting: 4 Prod HORZ Wells/1280

Comments: Presite Completed

**Fee Surface Agreement** 

Intent to Commingle

**Commingling Approved** 

**RDCC Review:** 

✓ PLAT

Stipulations: 1 - Exception Location - bhill

4 - Federal Approval - dmason

5 - Statement of Basis - bhill 8 - Cement to Surface -- 2 strings - hmacdonald

27 - Other - bhill



## State of Utah

DEPARTMENT OF NATURAL RESOURCES

MICHAEL R. STYLER
Executive Director

Division of Oil, Gas and Mining

JOHN R. BAZA
Division Director

## Permit To Drill

\*\*\*\*\*\*

Well Name: UTE TRIBAL 13-9-4-3-2WH

API Well Number: 43013520790000 Lease Number: 1420H626269 Surface Owner: FEE (PRIVATE) Approval Date: 9/10/2013

#### Issued to:

NEWFIELD PRODUCTION COMPANY, Rt 3 Box 3630, Myton, UT 84052

## **Authority:**

Pursuant to Utah Code Ann. 40-6-1 et seq., and Utah Administrative Code R649-3-1 et seq., the Utah Division of Oil, Gas and Mining issues conditions of approval, and permit to drill the listed well. This permit is issued in accordance with the requirements of Cause 139-98. The expected producing formation or pool is the GREEN RIVER Formation(s), completion into any other zones will require filing a Sundry Notice (Form 9). Completion and commingling of more than one pool will require approval in accordance with R649-3-22.

### **Duration:**

This approval shall expire one year from the above date unless substantial and continuous operation is underway, or a request for extension is made prior to the expiration date

## **Exception Location:**

Appropriate information has been submitted to DOGM and administrative approval of the requested exception location is hereby granted.

## General:

Compliance with the requirements of Utah Admin. R. 649-1 et seq., the Oil and Gas Conservation General Rules, and the applicable terms and provisions of the approved Application for permit to drill.

## **Conditions of Approval:**

State approval of this well does not supercede the required federal approval, which must be obtained prior to drilling.

Compliance with the Conditions of Approval/Application for Permit to Drill outlined in the Statement of Basis (copy attached).

In accordance with Utah Admin. R.649-3-21, the operator shall submit a complete angular deviation and directional survey report to the Division within 30 days following completion of the well.

Cement volumes for the 13 3/8" and 9 5/8" casing strings shall be determined from

actual hole diameters in order to place cement from the pipe setting depths back to the surface.

## **Notification Requirements:**

The operator is required to notify the Division of Oil, Gas and Mining of the following actions during drilling of this well:

• Within 24 hours following the spudding of the well - contact Carol Daniels at 801-538-5284

(please leave a voicemail message if not available)

submit an electronic sundry notice (pre-registration required) via the Utah Oil & Gas website

at http://oilgas.ogm.utah.gov

## Reporting Requirements:

All reports, forms and submittals as required by the Utah Oil and Gas Conservation General Rules will be promptly filed with the Division of Oil, Gas and Mining, including but not limited to:

- Entity Action Form (Form 6) due within 5 days of spudding the well
- Monthly Status Report (Form 9) due by 5th day of the following calendar month
  - Requests to Change Plans (Form 9) due prior to implementation
  - Written Notice of Emergency Changes (Form 9) due within 5 days
- Notice of Operations Suspension or Resumption (Form 9) due prior to implementation
  - Report of Water Encountered (Form 7) due within 30 days after completion
- Well Completion Report (Form 8) due within 30 days after completion or plugging

Approved By:

For John Rogers Associate Director, Oil & Gas Form 3160-3 (August 2007)

# RECEIVED

UNITED STATES DEPARTMENT OF THE INTERIOR MAR 1 1 2013 BUREAU OF LAND MANAGEMENT FORM APPROVED OMB No. 1004-0136 Expires July 31, 2010

Lease Serial No 1420H626269 APPLICATION FOR PERMIT TO DELL OR REENT If Indian, Allottee or Tribe Name UINTAH AND OURAY la. Type of Work: DRILL □ REENTER 7. If Unit or CA Agreement, Name and No. ONFIDENTIAI Lease Name and Well No. UTE TRIBAL 13-9-4-3-2WH 1b. Type of Well: Oil Well Other ☐ Gas Well ☐ Single Zone Multiple Zone 2. Name of Operator Contact: DON S HAMILTON API Well No. NEWFIELD EXPLORATION COMPANM: starpoint@etv.net 15-1113 3a. Address 3b. Phone No. (include area code) 10. Field and Pool, or Exploratory ROUTE 3 BOX 3630 Ph: 435-719-2018 Fx: 435-719-2019 UNDESIGNATED MYTON, UT 84052 4. Location of Well (Report location clearly and in accordance with any State requirements.\*) 11. Sec., T., R., M., or Blk. and Survey or Area At surface NENW 276FNL 1452FWL 40.134268 N Lat, 110.070830 W Lon Sec 16 T3S R2W Mer UBM SME: FEE At proposed prod. zone Lot 4 330FNL 660FWL 40.134268 N Lat, 110.070830 W Lon < 14. Distance in miles and direction from nearest town or post office\* 12. County or Parish 13. State 5.8 MILES NORTHWEST OF MYTON, UTAH DUCHESNE UT 15. Distance from proposed location to nearest property or 16. No. of Acres in Lease 17. Spacing Unit dedicated to this well lease line, ft. (Also to nearest drig. unit line, if any) 4130.84 18. Distance from proposed location to nearest well, drilling completed, applied for, on this lease, ft. Proposed Depth 20. BLM/BIA Bond No. on file 19124 MD RLB0010462 9336 TVD 21. Elevations (Show whether DF, KB, RT, GL, etc. 22. Approximate date work will start 23. Estimated duration 5256 GL 03/15/2103 60 DAYS 24. Attachments The following, completed in accordance with the requirements of Onshore Oil and Gas Order No. 1, shall be attached to this form: 1. Well plat certified by a registered surveyor. 4. Bond to cover the operations unless covered by an existing bond on file (see A Drilling Plan. Item 20 above A Surface Use Plan (if the location is on National Forest System Lands, the Operator certification SUPO shall be filed with the appropriate Forest Service Office). Such other site specific information and/or plans as may be required by the authorized officer. 25. Signature Name (Printed/Typed)
DON S HAMILTON Ph: 435-719-2018 Date (Electronic Submission) 03/06/2013 Title **PERMITTING AGENT** Approved by (Signature) Name (Printed/Typed) JUN 0 3 2013 Jerry Kenczka Assistant Field Manager Office VERNAL FIELD OFFICE Lands & Mineral Resources Application approval does not warrant or certify the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon

Additional Operator Remarks (see next page)

States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

Conditions of approval, if any, are attached.

RECEIVED

Electronic Submission #200769 verified by the DLIM WEIT INFORMATION COMPANY, sent to the Vernal For NEWFIELD EXPLORATION COMPANY, sent to the Vernal Committed to AFMSS for processing by JOHNETTA MAGEE on 03/21/2013 (13JM0887AE)

DIV. OF OIL, GAS & MINING

CONDITIONS OF APPROVAL ATTACHED Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United

NOTICE OF APPROVAL







# UNITED STATES DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT VERNAL FIELD OFFICE

**VERNAL, UT 84078** 

(435) 781-4400



## CONDITIONS OF APPROVAL FOR APPLICATION FOR PERMIT TO DRILL

Company: Well No:

Newfield Production Company

Ute Tribal 13-9-4-3-2WH

API No: 43-013-52079

Location: Lease No: NENW, Sec. 16, T3S, R2W

14-20-H62-6269

Agreement:

**OFFICE NUMBER:** 

(435) 781-4400

**OFFICE FAX NUMBER:** 

(435) 781-3420

## A COPY OF THESE CONDITIONS SHALL BE FURNISHED TO YOUR FIELD REPRESENTATIVE TO INSURE COMPLIANCE

All lease and/or unit operations are to be conducted in such a manner that full compliance is made with the applicable laws, regulations (43 CFR Part 3160), and this approved Application for Permit to Drill including Surface and Downhole Conditions of Approval. The operator is considered fully responsible for the actions of his subcontractors. A copy of the approved APD must be on location during construction, drilling, and completion operations. This permit is approved for a two (2) year period, or until lease expiration, whichever occurs first. An additional extension, up to two (2) years, may be applied for by sundry notice prior to expiration.

## **NOTIFICATION REQUIREMENTS**

Construction Activity (Notify Ute Tribe Energy & Minerals Dept. and BLM Environmental Scientist)	-	The Ute Tribe Energy & Minerals Dept. and BLM Environmenta Scientist shall be notified at least 48 hours in advance of any construction activity. The Ute Tribal office is open Monday through Thursday.						
Construction Completion (Notify Ute Tribe Energy & Minerals Dept. and BLM Environmental Scientist)	-	Upon completion of the pertinent APD/ROW construction, notify the Ute Tribe Energy & Minerals Dept. for a Tribal Technician to verify the Affidavit of Completion. Notify the BLM Environmental Scientist prior to moving on the drilling rig.						
Spud Notice (Notify BLM Petroleum Engineer)	-	Twenty-Four (24) hours prior to spudding the well.						
Casing String & Cementing (Notify BLM Supv. Petroleum Tech.)	-	Twenty-Four (24) hours prior to running casing and cementing all casing strings to: blm_ut_vn_opreport@blm.gov.						
BOP & Related Equipment Tests (Notify BLM Supv. Petroleum Tech.)	-	Twenty-Four (24) hours prior to initiating pressure tests.						
First Production Notice (Notify BLM Petroleum Engineer)	-	Within Five (5) business days after new well begins or production resumes after well has been off production for more than ninety (90) days.						

Page 2 of 6 Well: Ute Tribal 13-9-4-3-2WH 5/31/2013

## SURFACE USE PROGRAM CONDITIONS OF APPROVAL (COAs)

## **CONDITIONS OF APPROVAL:**

- It is recommend that Newfield consult with the Utah Division of Wildlife Resources to minimize impacts to birds, particularly protected under the Migratory Bird Treaty Act and to ensure compliance with Federal and State laws protecting Migratory Birds.
- Newfield will not pump surface water from the Green River. Specifically, for Newfield's
  development, water collection wells will be connected to a centralized pumping station via
  underground waterlines. The water wells will be developed using conventional drilling methods.
  Each well will extend to a depth of approximately 100 feet below the surface.

Page 3 of 6 Well: Ute Tribal 13-9-4-3-2WH 5/31/2013

## DOWNHOLE PROGRAM CONDITIONS OF APPROVAL (COAs)

## SITE SPECIFIC DOWNHOLE COAs:

- Cement for the intermediate casing will be brought to a minimum of 200 feet above the surface casing shoe.
- A CBL shall be run in the intermediate casing to TOC.
- Variances to OO2, Section III.E shall be granted as requested regarding the air drilling program for the surface hole.
- Cement samples shall be caught for all stages of cement work for the Surface and Intermediate casing strings and tested for compressive strength.

All provisions outlined in Onshore Oil & Gas Order #2 Drilling Operations shall be strictly adhered to. The following items are emphasized:

## DRILLING/COMPLETION/PRODUCING OPERATING STANDARDS

- The spud date and time shall be reported orally to Vernal Field Office within 24 hours of spudding.
- Notify Vernal Field Office Supervisory Petroleum Engineering Technician at least 24 hours in advance of casing cementing operations and BOPE & casing pressure tests.
- All requirements listed in Onshore Order #2 III. E. Special Drilling Operations are applicable for air drilling of surface hole.
- Blowout prevention equipment (BOPE) shall remain in use until the well is completed or abandoned. Closing unit controls shall remain unobstructed and readily accessible at all times. Choke manifolds shall be located outside of the rig substructure.
- All BOPE components shall be inspected daily and those inspections shall be recorded in the
  daily drilling report. Components shall be operated and tested as required by Onshore Oil &
  Gas Order No. 2 to insure good mechanical working order. All BOPE pressure tests shall be
  performed by a test pump with a chart recorder and <u>NOT</u> by the rig pumps. Test shall be
  reported in the driller's log.
- BOP drills shall be initially conducted by each drilling crew within 24 hours of drilling out from under the surface casing and weekly thereafter as specified in Onshore Oil & Gas Order No. 2.
- Casing pressure tests are required before drilling out from under all casing strings set and cemented in place.
- No aggressive/fresh hard-banded drill pipe shall be used within casing.

Page 4 of 6 Well: Ute Tribal 13-9-4-3-2WH 5/31/2013

- Cement baskets shall not be run on surface casing.
- The operator must report all shows of water or water-bearing sands to the BLM. If flowing water
  is encountered it must be sampled, analyzed, and a copy of the analyses submitted to the BLM
  Vernal Field Office.
- The operator must report encounters of all non oil & gas mineral resources (such as Gilsonite, tar sands, oil shale, trona, etc.) to the Vernal Field Office, in writing, within 5 working days of each encounter. Each report shall include the well name/number, well location, date and depth (from KB or GL) of encounter, vertical footage of the encounter and, the name of the person making the report (along with a telephone number) should the BLM need to obtain additional information.
- A complete set of angular deviation and directional surveys of a directional well will be submitted to the Vernal BLM office engineer within 30 days of the completion of the well.
- While actively drilling, chronologic drilling progress reports shall be filed directly with the BLM, Vernal Field Office on a weekly basis in sundry, letter format or e-mail to the Petroleum Engineers until the well is completed.
- A cement bond log (CBL) will be run from the production casing shoe to the top of cement and shall be utilized to determine the bond quality for the production casing. Submit a field copy of the CBL to this office.
- Please submit an electronic copy of all other logs run on this well in CD (compact disc) format to the Vernal BLM Field Office. This submission will supersede the requirement for submittal of paper logs to the BLM.
- There shall be no deviation from the proposed drilling, completion, and/or workover program as approved. Safe drilling and operating practices must be observed. Any changes in operation must have prior approval from the BLM Vernal Field Office.

## **OPERATING REQUIREMENT REMINDERS:**

- All wells, whether drilling, producing, suspended, or abandoned, shall be identified in accordance with 43 CFR 3162.6. There shall be a sign or marker with the name of the operator, lease serial number, well number, and surveyed description of the well.
- Should the well be successfully completed for production, the BLM Vernal Field office must be
  notified when it is placed in a producing status. Such notification will be by written
  communication and must be received in this office by not later than the fifth business day
  following the date on which the well is placed on production. The notification shall provide, as a
  minimum, the following informational items:
  - o Operator name, address, and telephone number.
  - Well name and number.
  - Well location (¼¼, Sec., Twn, Rng, and P.M.).
  - Date well was placed in a producing status (date of first production for which royalty will be paid).
  - o The nature of the well's production, (i.e., crude oil, or crude oil and casing head gas, or natural gas and entrained liquid hydrocarbons).
  - The Federal or Indian lease prefix and number on which the well is located; otherwise the non-Federal or non-Indian land category, i.e., State or private.
  - Unit agreement and/or participating area name and number, if applicable.
  - o Communitization agreement number, if applicable.
- Any venting or flaring of gas shall be done in accordance with Notice to Lessees (NTL) 4A and needs prior approval from the BLM Vernal Field Office.
- All undesirable events (fires, accidents, blowouts, spills, discharges) as specified in NTL 3A will be reported to the BLM, Vernal Field Office. Major events, as defined in NTL3A, shall be reported verbally within 24 hours, followed by a written report within 15 days. "Other than Major Events" will be reported in writing within 15 days. "Minor Events" will be reported on the Monthly Report of Operations and Production.
- Whether the well is completed as a dry hole or as a producer, "Well Completion and Recompletion Report and Log" (BLM Form 3160-4) shall be submitted not later than 30 days after completion of the well or after completion of operations being performed, in accordance with 43 CFR 3162.4-1. Two copies of all logs run, core descriptions, and all other surveys or data obtained and compiled during the drilling, workover, and/or completion operations, shall be filed on BLM Form 3160-4. Submit with the well completion report a geologic report including, at a minimum, formation tops, and a summary and conclusions. Also include deviation surveys, sample descriptions, strip logs, core data, drill stem test data, and results of production tests if

Page 6 of 6 Well: Ute Tribal 13-9-4-3-2WH 5/31/2013

performed. Samples (cuttings, fluid, and/or gas) shall be submitted only when requested by the BLM, Vernal Field Office.

- All off-lease storage, off-lease measurement, or commingling on-lease or off-lease, shall have prior written approval from the BLM Vernal Field Office.
- Oil and gas meters shall be calibrated in place prior to any deliveries. The BLM Vernal Field
  Office Petroleum Engineers will be provided with a date and time for the initial meter calibration
  and all future meter proving schedules. A copy of the meter calibration reports shall be
  submitted to the BLM Vernal Field Office. All measurement facilities will conform to the API
  standards for liquid hydrocarbons and the AGA standards for natural gas measurement. All
  measurement points shall be identified as the point of sale or allocation for royalty purposes.
- A schematic facilities diagram as required by Onshore Oil & Gas Order No. 3 shall be submitted
  to the BLM Vernal Field Office within 30 days of installation or first production, whichever occurs
  first. All site security regulations as specified in Onshore Oil & Gas Order No. 3 shall be
  adhered to. All product lines entering and leaving hydrocarbon storage tanks will be effectively
  sealed in accordance with Onshore Oil & Gas Order No. 3.
- Any additional construction, reconstruction, or alterations of facilities, including roads, gathering
  lines, batteries, etc., which will result in the disturbance of new ground, shall require the filing of
  a suitable plan and need prior approval of the BLM Vernal Field Office. Emergency approval
  may be obtained orally, but such approval does not waive the written report requirement.
- No location shall be constructed or moved, no well shall be plugged, and no drilling or workover
  equipment shall be removed from a well to be placed in a suspended status without prior
  approval of the BLM Vernal Field Office. If operations are to be suspended for more than 30
  days, prior approval of the BLM Vernal Field Office shall be obtained and notification given
  before resumption of operations.
- Pursuant to Onshore Oil & Gas Order No. 7, this is authorization for pit disposal of water produced from this well for a period of 90 days from the date of initial production. A permanent disposal method must be approved by this office and in operation prior to the end of this 90-day period. In order to meet this deadline, an application for the proposed permanent disposal method shall be submitted along with any necessary water analyses, as soon as possible, but no later than 45 days after the date of first production. Any method of disposal which has not been approved prior to the end of the authorized 90-day period will be considered as an Incident of Noncompliance and will be grounds for issuing a shut-in order until an acceptable manner for disposing of said water is provided and approved by this office.
- Unless the plugging is to take place immediately upon receipt of oral approval, the Field Office Petroleum Engineers must be notified at least 24 hours in advance of the plugging of the well, in order that a representative may witness plugging operations. If a well is suspended or abandoned, all pits must be fenced immediately until they are backfilled. The "Subsequent Report of Abandonment" (Form BLM 3160-5) must be submitted within 30 days after the actual plugging of the well bore, showing location of plugs, amount of cement in each, and amount of casing left in hole, and the current status of the surface restoration.

## BLM - Vernal Field Office - Notification Form

Operator Newfield Exploration Rig Name/# Pete Martin Rig #1
Submitted By Kylan Cook Phone Number 435-790-8236
Well Name/Number <u>Ute Tribal 13-9-4-3-2WH</u>
Qtr/Qtr NE/NW Section 16 Township 3S Range 2W
Lease Serial Number 14-20-H62-6269
API Number 43-013-52079
Spud Notice - Spud is the initial spudding of the well, not drillin
out below a casing string.
Date/Time <u>04/13/2014</u> <u>09:00</u> AM M PM
<u>Casing</u> – Please report time casing run starts, not cementing times.
Surface Casing
Intermediate Casing
Production Casing
Liner
Other
Date/Time AM PM
<u>BOPE</u>
Initial BOPE test at surface casing point
BOPE test at intermediate casing point
30 day BOPE test
Other
Date/Time AM
Remarks

Sundry Number: 50528 API Well Number: 43013520790000

	STATE OF UTAH		FORM 9
	DEPARTMENT OF NATURAL RESOURCE DIVISION OF OIL, GAS, AND MIN		5.LEASE DESIGNATION AND SERIAL NUMBER: 1420H626269
SUNDR	RY NOTICES AND REPORTS	ON WELLS	6. IF INDIAN, ALLOTTEE OR TRIBE NAME:
	oposals to drill new wells, significantly reenter plugged wells, or to drill horizon for such proposals.		7.UNIT or CA AGREEMENT NAME:
1. TYPE OF WELL Oil Well			8. WELL NAME and NUMBER: UTE TRIBAL 13-9-4-3-2WH
2. NAME OF OPERATOR: NEWFIELD PRODUCTION CO	OMPANY		9. API NUMBER: 43013520790000
3. ADDRESS OF OPERATOR: Rt 3 Box 3630 , Myton, UT	, 84052 435 646-4825	PHONE NUMBER: 5 Ext	9. FIELD and POOL or WILDCAT: NORTH MYTON BENCH
4. LOCATION OF WELL FOOTAGES AT SURFACE:			COUNTY: DUCHESNE
0276 FNL 1452 FWL QTR/QTR, SECTION, TOWNSH Qtr/Qtr: NENW Section:	<b>HIP, RANGE, MERIDIAN:</b> 16 Township: 03.0S Range: 02.0W Mer	idian: U	STATE: UTAH
11. CHEC	K APPROPRIATE BOXES TO INDICAT	TE NATURE OF NOTICE, REPOR	RT, OR OTHER DATA
TYPE OF SUBMISSION		TYPE OF ACTION	
	ACIDIZE	ALTER CASING	CASING REPAIR
NOTICE OF INTENT Approximate date work will start:	CHANGE TO PREVIOUS PLANS	CHANGE TUBING	CHANGE WELL NAME
	CHANGE WELL STATUS	COMMINGLE PRODUCING FORMATIONS	CONVERT WELL TYPE
SUBSEQUENT REPORT Date of Work Completion:	DEEPEN	FRACTURE TREAT	☐ NEW CONSTRUCTION
	OPERATOR CHANGE	PLUG AND ABANDON	PLUG BACK
✓ SPUD REPORT	PRODUCTION START OR RESUME	RECLAMATION OF WELL SITE	RECOMPLETE DIFFERENT FORMATION
Date of Spud: 4/13/2014	REPERFORATE CURRENT FORMATION	SIDETRACK TO REPAIR WELL	☐ TEMPORARY ABANDON
4/13/2014	TUBING REPAIR	VENT OR FLARE	WATER DISPOSAL
DRILLING REPORT Report Date:	WATER SHUTOFF	SI TA STATUS EXTENSION	APD EXTENSION
	WILDCAT WELL DETERMINATION	OTHER	OTHER:
			<u>'</u>
Pete Martin Rig #16 GL. Set 20", 52.78#	COMPLETED OPERATIONS. Clearly show a Sounded 26" hole on 04/13 (0.250" wall), SA53B conduction with Red	3/2014 and drilled to 60' actor pipe at 60' GL and	
NAME (DI EAGE BOWE)	BLIGHT W.	ED TITLE	
NAME (PLEASE PRINT) Cherei Neilson	<b>PHONE NUMB</b> 435 646-4883	ER TITLE Drilling Techinacian	
SIGNATURE N/A		<b>DATE</b> 5/1/2014	

RECEIVED: May. 01, 2014

Sundry Number: 50528 API Well Number: 43013520790000 **NEWFIELD** Casing Conductor Legal Well Name Wellbore Name Ute Tribal 13-9-4-3-2WH Original Hole Surface Legal Location Well Type Well Configuration Type ield Name 43013520790000 NENW 276FNL 1452FWL Sec16 T3S R2W MerU UINTA CB - UTELAND BUTTE | Development Horizontal Well RC State/Province Final Rig Release Date Duchesne 500353248 Utah Wellbore Kick Off Depth (ftKB) Original Hole Section Des Size (in) Actual Top Depth (MD) (ftKB) Actual Bottom Depth (MD) (ftKB) Start Date End Date Conductor 26 60 4/13/2014 4/13/2014 Wellhead Install Date Service Comment Wellhead Components Make Model SN WP Top (psi) Casing Casing Description Set Depth (ftKB) Run Date Set Tension (kips) Conductor 60 4/13/2014 Centralizers Scratchers Casing Components Mk-up Tq Max OD (in) Item Des OD (in) ID (in) Wt (lb/ft) Top Thread Top (ftKB) Btm (ftKB) Class Grade Jts Len (ft) Conductor Pipe 19.500 52.78 SA53B Welded 2 60.00 0.0 **Jewelry Details External Casing Packer** etting Requirement nflation Method Vol Inflation (gal) Equiv Hole Sz (in) ECP Load (1000lbf) Inflation Fluid Type Infl Fl Dens (lb/gal) P ICV Act (psi) Seal Load (1000lbf) P AV Set (psi) AV Acting Pressure (psi) P ICV Set (psi) Slotted Liner % Open Area (%) Perforation Min Dimension (in) Perforation Max Dimension (in) Axial Perf Spacing (ft) Perf Rows Blank Top Length (ft) Blank Bottom Length (ft) Slot Description Slot Frequency Slot Pattern Slot Length (in) Slot Width (in) Screen Gauge (ga) Liner Hanger Retrievable? Elastomer Type Element Center Depth (ft) Polish Bore Size (in) Polish Bore Length (ft) Slip Description Set Mechanics Setting Procedure Unsetting Procedure

Sundry Number: 50528 API Well Number: 43013520790000 **NEWFIELD** Casing **Surface** Legal Well Name Wellbore Name Ute Tribal 13-9-4-3-2WH Original Hole Surface Legal Location Well Type Well Configuration Type 43013520790000 NENW 276FNL 1452FWL Sec16 T3S R2W MerU UINTA CB - UTELAND BUTTE | Development Horizontal Well RC State/Province Final Rig Release Date 500353248 Duchesne Utah Wellbore Kick Off Depth (ftKB) Original Hole Section Des Size (in) Actual Top Depth (MD) (ftKB) Actual Bottom Depth (MD) (ftKB) Start Date End Date Conductor 26 60 4/13/2014 4/13/2014 Vertical 17 1/2 60 1,635 4/17/2014 4/19/2014 Wellhead Install Date Service Comment **Wellhead Components** Make Model SN WP Top (psi) Casing Casing Description Set Depth (ftKB) Run Date Set Tension (kips) Surface 1,615 4/20/2014 Scratchers Centralizers 14 centralizers spaced 10' from the shoe, on top of joints #2 & #3 then every 3rd collar to surface. **Casing Components** Mk-up Tq Max OD (in) OD (in) Top Thread Btm (ftKB) Item Des ID (in) Wt (lb/ft) Grade Len (ft) Top (ftKB) Jts Casing Joints 13 3/8 12.615 54.50 J-55 **Buttress** 37 1,568.89 0.2 1,569.1 Thread Float Collar **Buttress** 1.50 1,569.1 1,570.6 Thread 13 3/8 **Casing Joints** 12.615 54.50 J-55 **Buttress** 43.40 1,570.6 1,614.0 Thread Guide Shoe Buttress 1.00 1,614.0 1,615.0 Thread Jewelry Details External Casing Packer Inflation Method Setting Requirement Release Requirements Vol Inflation (gal) Equiv Hole Sz (in) Inflation Fluid Type Infl Fl Dens (lb/gal) P AV Set (psi) AV Acting Pressure (psi) P ICV Set (psi) P ICV Act (psi) ECP Load (1000lbf) Seal Load (1000lbf) Slotted Liner % Open Area (%) Perf Rows Blank Bottom Length (ft) Perforation Min Dimension (in) Perforation Max Dimension (in) Axial Perf Spacing (ft) Blank Top Length (ft) Slot Frequency Slot Description Slot Pattern Slot Length (in) Slot Width (in) Screen Gauge (ga) Liner Hanger Retrievable? Elastomer Type Element Center Depth (ft) Polish Bore Size (in) Polish Bore Length (ft) Slip Description Set Mechanics Setting Procedure Unsetting Procedure

	STATE OF UTAH		FORM 9
ı	DEPARTMENT OF NATURAL RESOURCE DIVISION OF OIL, GAS, AND MIN		5.LEASE DESIGNATION AND SERIAL NUMBER: 1420H626269
SUNDR	Y NOTICES AND REPORTS	ON WELLS	6. IF INDIAN, ALLOTTEE OR TRIBE NAME:
Do not use this form for pro current bottom-hole depth, FOR PERMIT TO DRILL form	posals to drill new wells, significantly reenter plugged wells, or to drill horizon for such proposals.	deepen existing wells below ntal laterals. Use APPLICATION	7.UNIT or CA AGREEMENT NAME:
1. TYPE OF WELL Oil Well			8. WELL NAME and NUMBER: UTE TRIBAL 13-9-4-3-2WH
2. NAME OF OPERATOR: NEWFIELD PRODUCTION CO	DMPANY		9. API NUMBER: 43013520790000
3. ADDRESS OF OPERATOR: 1001 17th Street, Suite 200	00 , Denver, CO, 80202	<b>PHONE NUMBER:</b> 303 382-4443 Ext	9. FIELD and POOL or WILDCAT: NORTH MYTON BENCH
4. LOCATION OF WELL FOOTAGES AT SURFACE: 0276 FNL 1452 FWL			COUNTY: DUCHESNE
QTR/QTR, SECTION, TOWNSH	tip, RANGE, MERIDIAN: 16 Township: 03.0S Range: 02.0W Mer	idian: U	STATE: UTAH
11. CHECI	K APPROPRIATE BOXES TO INDICAT	TE NATURE OF NOTICE, REPOR	RT, OR OTHER DATA
TYPE OF SUBMISSION		TYPE OF ACTION	
-	ACIDIZE	ALTER CASING	CASING REPAIR
✓ NOTICE OF INTENT  Approximate date work will start:	✓ CHANGE TO PREVIOUS PLANS	CHANGE TUBING	CHANGE WELL NAME
5/27/2014	CHANGE WELL STATUS	COMMINGLE PRODUCING FORMATIONS	CONVERT WELL TYPE
SUBSEQUENT REPORT	DEEPEN	FRACTURE TREAT	NEW CONSTRUCTION
Date of Work Completion:	OPERATOR CHANGE	PLUG AND ABANDON	PLUG BACK
SPUD REPORT	PRODUCTION START OR RESUME	RECLAMATION OF WELL SITE	RECOMPLETE DIFFERENT FORMATION
Date of Spud:	REPERFORATE CURRENT FORMATION	SIDETRACK TO REPAIR WELL	☐ TEMPORARY ABANDON
	L TUBING REPAIR	VENT OR FLARE	WATER DISPOSAL
DRILLING REPORT Report Date:	WATER SHUTOFF	SI TA STATUS EXTENSION	APD EXTENSION
	WILDCAT WELL DETERMINATION	OTHER	OTHER:
12. DESCRIBE PROPOSED OR	COMPLETED OPERATIONS. Clearly show a	all pertinent details including dates, o	lepths, volumes, etc.
Newfield Prod	uction Company respectfully	requests that the	Approved by the
_	<mark>ng and horizontal plan be</mark> c	•	Oil Consult Minimum
l -	asing and cement details. N		
	ttom hole location. Attached		Date:
drilling plan	and horizontal plan reflection	ng the changes.	By: Der K Ourt
NAME (PLEASE PRINT) Don Hamilton	<b>PHONE NUMB</b> 435 719-2018	ER TITLE Permitting Agent (Star Poin	t Enterprises, Inc.)
SIGNATURE N/A		<b>DATE</b> 5/22/2014	

## **Newfield Production Company** 13-9-4-3-2WH

Surface Hole Location: 276' FNL, 1452' FWL, Section 16, T3S, R2W Bottom Hole Location: 330' FNL, 660' FWL, Section 4, T3S, R2W **Duchesne County, UT** 

## **Drilling Program**

#### 1. **Formation Tops**

Uinta surface Green River 3,599' Garden Gulch 6,441' Uteland Butte Member 8,750'

Lateral TD 9,408' TVD / 19,322' MD

#### 2. Depth to Oil, Gas, Water, or Minerals

Base of moderately saline 2,013' (water) Green River 6,441' - 8,750' (oil) Uteland Butte Member 8,750' 9,408' (oil)

#### 3. **Pressure Control**

**BOP** Description Section

Surface Diverter

Intermediate The BOP and related equipment shall meet the minimum requirements of Onshore

Oil and Gas Order No. 2 for equipment and testing requirements, procedures, etc for

a 5M system.

Prod/Prod Liner The BOP and related equipment shall meet the minimum requirements of Onshore

Oil and Gas Order No. 2 for equipment and testing requirements, procedures, etc for

a 5M system.

A 5M BOP system will consist of 2 ram preventers (double or two singles) and an annular preventer (see attached diagram). A choke manifold rated to at least 5,000

psi will be used.

#### 4. Casing

<b>D</b>	Interval		Weight		Coup	Pore	MW @	Frac	Safety Factors				
Description	Тор	Bottom (TVD/MD)	(ppf)	Grade	Coup	Press @ Shoe	Shoe	Grad @ Shoe	Burst	Collapse	Tension		
Conductor	0'	60'			Weld				-				
20	0	U	0	00			weid						
Surface	0'	1.500'	54.5	J-55	STC	8.33	8.4	14	2,730	1,130	514,000		
13 3/8	0'	0,500	34.3	<b>J</b> -33	310	0.33	0.4	14	2.89	2.63	6.29		
Intrm Drilling	0'	8,398'	40	N-80	BTC	10	10.5	16	5,750	3,090	916,000		
9 5/8	U	8,444'	40	IN-6U	ыс	10	10.5	10	1.31	1.35	2.73		
Production	0'	9,408'	20	20 2110		1.4	145	17	12,360	11,080	641,000		
5 1/2	U	19,322'	20	P-110	BTC	14	14.5	17	2.27	1.95	1.66		

#### Assumptions:

Surface casing MASP = (frac gradient + 1.0 ppg) - (gas gradient)

Intermediate casing drilling MASP = 0.5 ppg gas kick with a 70 bbl gain and frac at the shoe with a 1 ppg safety factor

Production casing MASP = (reservoir pressure) - (gas gradient)

Intermediate collapse calculations assume 50% evacuated

Maximum intermediate csg collapse load assumes loss of mud to a fluid level of 4,199'

Intermediate csg run from surface to 8,398' TVD and will not experience full evacuation

Production csg run from surface to TD will isolate intermediate csg from production loads

Production csg withstands burst and collapse loads for anticipated production conditions

Surface & production collapse calcs assume fully evacuated casing w/a gas gradient

All tension calculations assume air weight of casing

Gas gradient = 0.15 psi/ft

All casing shall be new.

All casing strings shall have a minimum of 1 centralizer on each of the bottom 3 joints.

#### 5. Cement

T.1.	H-1- 6!	E	Classes Description	ft <sup>3</sup>	OH	Weight	Yield
Job	Hole Size	Fill	Slurry Description	sacks	OH excess	(ppg)	(ft <sup>3</sup> /sk)
Conductor	24	60'	Class G w/ 2% KCl + 0.25 lbs/sk Cello Flake	66	15%	15.8	1.17
Collductor	24	00	Class G w/ 2% KCl + 0.23 lbs/sk Cello Flake	57	1370	13.6	1.17
Surface	17 1/2	1,000'	Varicem (Type III) + .125 lbs/sk Cello Flakes	799	15%	11.0	3.33
Lead			Variceiii (Type III) + .123 ios/sk Ceiio Fiakes	240	1370	11.0	3.33
Surface	17 1/2	500'	Varicem (Type III) + .125 lbs/sk Cello Flakes	399	15%	13.0	1.9
Tail			Variceiii (Type III) + .123 ios/sk Ceiio Fiakes	210	1370	13.0	1.9
Intermediate	12 1/4	6,441'	HLC Premium - 35% Poz/65% Glass G + 10%	2320	15%	11.0	3.53
Lead	12 1/4	0,441	bentonite	657	1370	11.0	3.33
Intermediate	12 1/4	2,003'	50/50 Poz/Class G + 1% bentonite	721	15%	14.0	1.29
Tail	12 1/4	2,003	50/30 F0Z/Class G + 1% bentonite	559	1370	14.0	1.29
Production	8 3/4	1,334'	Elastiseal Unfoamed	371	10%	17.3	1.84
Lead	0 3/4	1,334	Elasuscai Olifoanicu	201	10%	17.3	1.64
Production	8 3/4	10.044	Elastiseal Foamed	2537	0%	14.5 - 17.3	1.84
Tail	0 3/4	10,044'	Elasuscai Foained	1379	U%	14.3 - 17.3	1.84

The surface casing will be cemented to surface. In the event that cement does not reach surface during the primary cement job, a remedial job will be performed.

Actual cement volumes for the intermediate casing string will be calculated from an open hole caliper log or gauge hole if logs are not ran, plus 15% excess.

The 5.5" production string will be run from surface to TD and cemented to setback. The cement slurries will be adjusted for hole conditions and blend test results. The lateral will be cemented past the setback.

The wellbore will cross the heal setback @ 9,278' MD
The first perforation will be within 19,187' MD

Per the directional plan, the bore hole will be drilled 135' past the toe setback for the rat hole and shoe track. This well will not be perforated or produced outside the legal setbacks.

#### 6. Type and Characteristics of Proposed Circulating Medium

#### **Interval** Description

Surface - 1,500'

An air and/or fresh water system will be utilized. If an air rig is used, the blooie line discharge may be less than 100' from the wellbore in order to minimize location size. The blooie line is not equipped with an automatic igniter. The air compressor may be located less than 100' from the well bore due to the low possibility of combustion with the air/dust mixture. Water will be on location to be used as kill fluid, if necessary.

1.500' - 8,444' A water based mud system will be utilized. Hole stability may be improved with additions of KCl or a similar inhibitive substance. In order to control formation pressure the system will be weighted with additions of bentonite, and if conditions warrant, with barite.

Anticipated maximum mud weight is

10.5 ppg.

A

8,444' - TD One of two possible mud systems may be used depending on offset well performance on ongoing wells:

> water based mud: Hole stability may be improved with additions of KCl or a similar inhibitive substance. In order to control formation pressure the system will be weighted with additions of bentonite, and if conditions warrant, with barite.

> > -or-

A diesel based OBM system: with an oil to water ratio between 70/30 and 80/20. Emulsifiers and wetting agents will be used to maintain adequate mud properties. A water phase salinity will be maintained in the range of 25% using CaCl (Calcium Chloride). All cuttings will be dried and centrifuged so that they can be easily transferred to a lined cuttings pit with little to no free fluid on them. The cuttings will be mixed with fly ash prior to transportation to a location on Newfield owned surface. Once on Newfield owned surface, the cuttings will be treated with the previously approved FIRMUS process and used as a construction material on future location and/or roads on Newfield owned surface. The cuttings may also be transported to a state approved disposal facility.

Anticipated maximum mud weight is 14.5 ppg.

#### 7. Logging, Coring, and Testing

A dual induction, gamma ray, and caliper log may be run from KOP to the base of the Logging:

> surface casing. An azimuthal gamma ray LWD log will be run from the shoe of the intermediate casing to TD. A cement bond log will be run from KOP to the cement top

behind the production casing and or intermediate casing.

Cores: As deemed necessary.

DST: There are no DST's planned for this well.

#### 8. Anticipated Abnormal Pressure or Temperature

Maximum anticipated bottomhole pressure will be approximately equal to total depth (feet) multiplied by a 0.73 psi/ft gradient.

$$9,408' \text{ x}$$
 0.73 psi/ft = 6849 psi

No abnormal temperature is expected. No H<sub>2</sub>S is expected.

## 9. Other Aspects

The lateral of this well will target the Uteland Butte member of the Green River formation

After setting 9-5/8" casing, an 8-3/4" vertical hole will be drilled to a kick off point of

8,444'

Directional tools will then be used to build to

86.90 degrees inclination.

The lateral will be drilled to the bottomhole location shown on the plat. A 5-1/2" longstring will be run from surface to TD and cemented in place.

Newfield requests the following variances from Onshore Order #2:

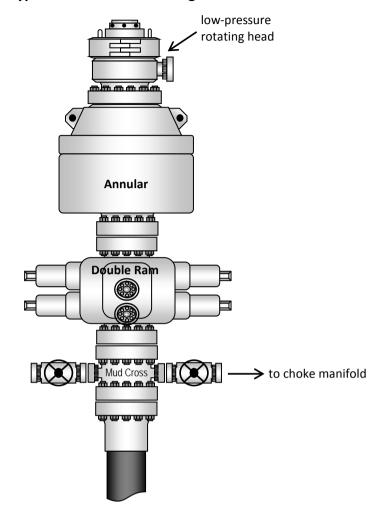
 Variance from Onshoer Order #2, III.E.1
 Refer to Newfield Production Company Standard Operating Practices "Ute Tribal Green River Development Program" paragraph 9.0

If oil based mud (OBM) is used and If Newfield owns the surface rights on the same drilling site at a location where construction is desired, the cuttings may be used for construction by a Firmus® process at that location. Otherwise, after the cuttings have been made safe for transport as described in paragraph 6, they will be transported to another location on which Newfield owns surface rights and there mixed, as part of a Firmus® process, with at least one additional chemical that will convert them to a temporarily uncured cementitious mixture that will be placed and shaped into a temporary desired final structure that will spontaneously harden within seven days after placement to form the desired structure. Samples of the temporary desired final structure may be taken for testing as described below (after the samples have hardened), or samples of the starting pretreated cuttings and mud will be taken during the construction and later mixed in a laboratory, molded, and cured to simulate the final structure as well as reasonably possible. Either these laboratory-made simulations of the final structure or samples of the temporary mixture itself after hardening, will be mechanically tested directly to determine their unconfined compressive strength and their hydraulic conductivity. Leachates of the mechanically tested structures themselves or of finer particles made by crushing and size-grading of the mechanically tested structures themselves to a specified particle size range will be analyzed, according to specified methods, for their contents of arsenic, barium, cadmium, chromium, lead, mercury, selenium, silver, zinc, benzene, total petroleum hydrocarbons (TPH), and chlorides, and the pH of these leachates will also be measured. The results of all these tests will be reported by Newfield to UDOGM at intervals as requested, along with the latitude and longitude (or other comparable location data) of the site of the useful constructions built.

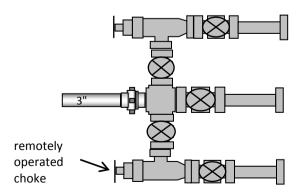
Water flows in the surface hole are likely. If the water flow is less than 400 bbls/hr, the well will be allowed to flow until the surface casing point is reached and water will be hauled off location. If the water flow is greater than 400 bbls/hr, the water flow will be controlled with kill weight mud which will be maintained until TD. In both situations, the cement density will be adjusted to meet or exceed the mud weight needed to kill the water flow and the well will be shut in once cement is in place. If cement fails to reach the surface or falls back, a top job will be performed to bring cement to surface. Any water flows will be sampled and tested and results will be sent to UDOGM.

A diveter will be used to drill the surface hole interval.

**Typical 5M BOP stack configuration** 



Typical 5M choke manifold configuration





## **NEWFIELD EXPLORATION CO.**

DUCHESNE COUNTY, UT
UTE TRIBAL 13 and 14-9-4-3-2WH PAD
UTE TRIBAL 13-9-4-3-2WH

**UTE TRIBAL 13-9-4-3-2WH** 

Plan: Design #2

## **PROPOSAL**

14 May, 2014



Sundry Number: 51413 API Well Number: 43013520790000 Project: DUCHESNE COUNTY, UT Site: UTE TRIBAL 13 and 14-9-4-3-2WH PAD NEWFIELD Well: UTE TRIBAL 13-9-4-3-2WH Wellbore: UTE TRIBAL 13-9-4-3-2WH Design: Design #2 **Weatherford** Latitude: 40° 13' 42.680 N Longitude: 110° 7' 8.300 W GL: 5256.00 KB: WELL @ 5284.00ft (Pioneer 78) 12000 10605.13' N, 925.63' W TD UTE TRIBAL 13-9-4-3-2WH 330 FNL' 710' FWL WELLBORE TARGET DETAILS (LAT/LONG) **SEC. 4 T3S R2W** SECTION LINE Longitude 110° 7' 18.078 W Start 135.00 hold at 19187.15 MD 577.15 2025224.25 8° CURVE UTLAND BUTTE C PZ2 TGT 8865.24 -758.36 7255507.51 40° 13' 48.384 N 330' OFFSET 10500 PBHL UTE TRIBAL 13-9-4-3-2WH 9401.05 10470.34 -923.38 7265396.95 2024906.51 40° 15' 26.155 N 110° 7' 20,211 W 135' PAST PBHL UTE TRIBAL 13-9-4-3-2WH 9408.35 10605.13 -925.63 7265531.69 2024902.18 40° 15' 27.487 N 110° 7' 20.240 W PBHL UTE TRIBAL 13-9-4-3-2WH UTE TRIBAL 14-9-4-3-2WH WELL DETAILS: UTE TRIBAL 13-9-4-3-2WH 9000 5256.00 Ground Level: Northing +N/-S +E/-W Latittude Longitude 110° 7' 8.300 W Slot Easting 2025991.43 0.00 0.00 7254942.13 40° 13' 42.680 N (3000 SECTION DETAILS MD Inc Azi TVD +N/-S +E/-W Dleg 0.00 TFace Annotation SECTION 3 3.87 261.30 1572.00 -17.38 -58.15 -12.26 Start 126.00 hold at 1574.00 MD South(-)/North(+) 1574.00 0.00 1700.00 3.87 261.30 1697.71 -18.67 -66.55 0.00 0.00 -12.81 Start DLS 5.00 TFO -2.14 6.07 260.52 1741.56 -70.32 5.00 -13.09 Start 6263.60 hold at 1744.02 MD -19.28 -2.14 8007.62 6.07 260.52 7970.04 -128.35 -723.61 0.00 0.00 -64.95 Start DLS 5.00 TFO 113.88 SECTION LINE LATERAL TARGET BOX: SECTION LINE 20.00 359.04 8395.04 -57.03 -747.78 5.00 113.88 Start Build 8.00 50' LEFT & 50' RIGHT OF Start 9909.07 hold at 9278.09 MD 9278.09 86.90 359.04 8865.24 577.15 -758.36 8.00 0.00 640.91 19187.15 86.90 359.04 9401.11 10470.34 -923.38 0.00 0.0010510.98 Start 135.00 hold at 19187.15 MD PROPOSED WELL PATH. 19322.15 86.90 359.04 9408.41 10605.13 -925.63 0.00 0.0010645.45 TD at 19322.15 4500 PROJECT DETAILS: DUCHESNE COUNTY, UT Start DLS 5.00 TFO 113.8 Geodetic System: US State Plane 1983 Datum: North American Datum 1983 SECTION 10 B Limestone Ellipsoid: GRS 1980 Zone: Utah Central Zone 3000 System Datum: Mean Sea Level 8250-Lower Black Shal Castle Peak Limestone CASING DETAILS XISTING 14-9-3-2 Depth Start Build 8.00 CP LIMES 500 Name Size 8° CURVE UTLAND BUTTE C PZ2 TG 8500 CP LIMES\_2 1612.90 1615.00 13 3/8" 13-3/8 Start 9909.07 hold at 9278.09 MD 330' OFFSET 8398.00 8444.98 9 5/8" 9-5/8 Start 9909 07 hold at 9278 09 MI Uteland Butte Uteland Butte 'A' Start Build 8 00 SECTION LINE Uteland Butte 'C' Azimuths to True North Magnetic North: 11.09 9 5/8" 276' FNL, 1452' FWL SECTION 14 Magnetic Field Strength: 51978.2snT SEC. 16 T3S R2W 13 3/8" Uteland Butte 'C PZ1' Dip Angle: 65.84° 8° CURVE UTLAND BUTTE C PZ2 TGT Date: 5/13/2014 Model: BGGM2013 Uteland Butte 'D' -6000 -4500 -3000 -1500 1500 3000 4500 1000 West(-)/East(+) (3000 ft/in) Vertical Section at 355.01° (500 ft/in) 7200 Start DLS 5.00 TFO 113.88 7800 Vertical Depth (1200 ft Start 135.00 hold at 19187.15 MD 9 5/8 Start Build 8.00 TD at 19322.15 Start 9909.07 hold at 9278.09 MI PBHL UTE TRIBAL 13-9-4-3-2WH <u>9000</u> 8° CURVE UTLAND BUTTE C PZ2 TGT 135' PAST P Plan: Design #2 (UTE TRIBAL 13-9-4-3-2WH/UTE TRIBAL 13-9-4-3-2WH) 1200 2400 4200 -1200 600 1800 3000 4800 5400 6000 6600 Vertical Section at 355.01° (1200 ft/in) TRACY WILLIAMS Date: 12:15, May 14 2014



## **NEWFIELD EXPLORATION CO.**

DUCHESNE COUNTY, UT
UTE TRIBAL 13 and 14-9-4-3-2WH PAD
UTE TRIBAL 13-9-4-3-2WH

**UTE TRIBAL 13-9-4-3-2WH** 

Plan: Design #2

## **Standard Planning Report**

14 May, 2014





### Weatherford International Ltd.



Planning Report



Database: EDM 5000.1 Single User Db
Company: NEWFIELD EXPLORATION CO.
Project: DUCHESNE COUNTY, UT
Site: UTE TRIBAL 13 and 14-9-4-3-2WH PAD

Well: UTE TRIBAL 13-9-4-3-2WH
Wellbore: UTE TRIBAL 13-9-4-3-2WH

Design: Design #2

Local Co-ordinate Reference: TVD Reference: MD Reference: North Reference:

Survey Calculation Method:

Well UTE TRIBAL 13-9-4-3-2WH WELL @ 5284.00ft (Pioneer 78) WELL @ 5284.00ft (Pioneer 78)

True

Minimum Curvature

Project DUCHESNE COUNTY, UT

Map System: US State Plane 1983
Geo Datum: North American Datum 1983

Map Zone: Utah Central Zone

System Datum: Mean Sea Level

Site UTE TRIBAL 13 and 14-9-4-3-2WH PAD

Northing: 7 254 942.13 usft Site Position: Latitude: 40° 13' 42.680 N From: Lat/Long Easting: 2 025 991.43 usft Longitude: 110° 7' 8.300 W **Position Uncertainty:** 0.00 ft Slot Radius: 13-3/16" **Grid Convergence:** 0.88°

Well UTE TRIBAL 13-9-4-3-2WH **Well Position** +N/-S 0.00 ft Northing: 7 254 942.13 usft Latitude: 40° 13' 42.680 N +E/-W 0.00 ft Easting: 2 025 991.43 usft Longitude: 110° 7' 8.300 W **Position Uncertainty** 0.00 ft Wellhead Elevation: ft Ground Level: 5 256.00 ft

Wellbore UTE TRIBAL 13-9-4-3-2WH Magnetics **Model Name** Sample Date Declination **Dip Angle** Field Strength (nT) (°) (°) 5/13/2014 BGGM2013 11.09 65.84 51 978

Design Design #2 Audit Notes: Tie On Depth: Version: Phase: PLAN 1 574.00 Vertical Section: Depth From (TVD) +N/-S +E/-W Direction (ft) (ft) (ft) (°) 0.00 0.00 355.01 0.00

Plan Sections										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	TFO (°)	Target
1 574.00	3.87	261.30	1 572.00	-17.38	-58.15	0.00	0.00	0.00	0.00	
1 700.00	3.87	261.30	1 697.71	-18.67	-66.55	0.00	0.00	0.00	0.00	
1 744.02	6.07	260.52	1 741.56	-19.28	-70.32	5.00	5.00	-1.77	-2.14	
8 007.62	6.07	260.52	7 970.04	-128.35	-723.61	0.00	0.00	0.00	0.00	
8 441.83	20.00	359.04	8 395.04	-57.03	-747.78	5.00	3.21	22.69	113.88	
9 278.09	86.90	359.04	8 865.24	577.15	-758.36	8.00	8.00	0.00	0.00	8° CURVE UTLAND I
19 187.15	86.90	359.04	9 401.11	10 470.34	-923.38	0.00	0.00	0.00	0.00	PBHL UTE TRIBAL 1
19 322.15	86.90	359.04	9 408.41	10 605.13	-925.63	0.00	0.00	0.00	0.00	135' PAST PBHL UTE

5/14/2014 12:18:33PM Page 2 COMPASS 5000.1 Build 56



Site:

## Weatherford International Ltd.

## Planning Report



**Weatherford** 

Database: EDM 5000
Company: NEWFIELD
Project: DUCHESN

EDM 5000.1 Single User Db NEWFIELD EXPLORATION CO. DUCHESNE COUNTY, UT

UTE TRIBAL 13 and 14-9-4-3-2WH PAD

Well: UTE TRIBAL 13-9-4-3-2WH
Wellbore: UTE TRIBAL 13-9-4-3-2WH

Design: Design #2

Local Co-ordinate Reference:

TVD Reference:
MD Reference:
North Reference:

Survey Calculation Method:

Well UTE TRIBAL 13-9-4-3-2WH WELL @ 5284.00ft (Pioneer 78) WELL @ 5284.00ft (Pioneer 78)

ue

Minimum Curvature

ned Su	urvey									
	easured Depth	Inclination	Azimuth	Vertical Depth	+N/-S	+E/-W	Vertical Section	Dogleg Rate	Build Rate	Turn Rate
	(ft)	(°)	(°)	(ft)	(ft)	(ft)	(ft)	(°/100usft)	(°/100usft)	(°/100usft)
S	tart 126 00 l	hold at 1574.00	MD							
Ū	1 574.00	3.87	261.30	1 572.00	-17.38	-58.15	-12.26	0.00	0.00	0.00
	1 600.00	3.87	261.30	1 597.94	-17.65	-59.88	-12.37	0.00	0.00	0.00
1	3 3/8"									
	1 615.00	3.87	261.30	1 612.90	-17.80	-60.88	-12.44	0.00	0.00	0.00
S	tart DLS 5.0	00 TFO -2.14								
	1 700.00	3.87	261.30	1 697.71	-18.67	-66.55	-12.81	0.00	0.00	0.00
S	tart 6263.60	hold at 1744.02	2 MD							
	1 744.02	6.07	260.52	1 741.56	-19.28	-70.32	-13.09	5.00	5.00	-1.77
	1 800.00	6.07	260.52	1 797.23	-20.25	-76.15	-13.55	0.00	0.00	0.00
	1 900.00	6.07	260.52	1 896.67	-21.99	-86.58	-14.38	0.00	0.00	0.00
	2 000.00	6.07	260.52	1 996.11	-23.73	-97.01	-15.21	0.00	0.00	0.00
U	Isable Water	r								
	2 015.77	6.07	260.52	2 011.79	-24.01	-98.66	-15.34	0.00	0.00	0.00
	2 100.00	6.07	260.52	2 095.54	-25.48	-107.44	-16.04	0.00	0.00	0.00
	2 200.00	6.07	260.52	2 194.98	-27.22	-117.87	-16.86	0.00	0.00	0.00
	2 300.00	6.07	260.52	2 294.42	-28.96	-128.30	-17.69	0.00	0.00	0.00
	2 400.00	6.07	260.52	2 393.86	-30.70	-138.73	-18.52	0.00	0.00	0.00
	2 500.00	6.07	260.52	2 493.30	-32.44	-149.16	-19.35	0.00	0.00	0.00
	2 600.00	6.07	260.52	2 592.74	-34.18	-159.59	-20.18	0.00	0.00	0.00
	2 700.00	6.07	260.52	2 692.18	-35.92	-170.02	-21.00	0.00	0.00	0.00
	2 800.00	6.07	260.52	2 791.62	-37.67	-180.45	-21.83	0.00	0.00	0.00
	2 900.00	6.07	260.52	2 891.06	-39.41	-190.88	-22.66	0.00	0.00	0.00
	3 000.00	6.07	260.52	2 990.50	-41.15	-201.31	-23.49	0.00	0.00	0.00
	3 100.00	6.07	260.52	3 089.94	-42.89	-211.74	-24.32	0.00	0.00	0.00
	3 200.00	6.07	260.52	3 189.38	-44.63	-222.17	-25.14	0.00	0.00	0.00
	3 300.00	6.07	260.52	3 288.82	-46.37	-232.60	-25.97	0.00	0.00	0.00
	3 400.00	6.07	260.52	3 388.26	-48.11	-243.03	-26.80	0.00	0.00	0.00
	3 500.00 3 600.00	6.07 6.07	260.52 260.52	3 487.70 3 587.13	-49.86 -51.60	-253.46 -263.89	-27.63 -28.46	0.00 0.00	0.00 0.00	0.00 0.00
	3 000.00	0.07	200.52	3 307.13	-51.00	-203.09	-20.40	0.00	0.00	0.00
G	reen River	Formation								
	3 609.36	6.07	260.52	3 596.44	-51.76	-264.87	-28.53	0.00	0.00	0.00
	3 700.00	6.07	260.52	3 686.57	-53.34	-274.32	-29.28	0.00	0.00	0.00
	3 800.00	6.07	260.52	3 786.01	-55.08	-284.75	-30.11	0.00	0.00	0.00
	3 900.00 4 000.00	6.07 6.07	260.52 260.52	3 885.45 3 984.89	-56.82 -58.56	-295.18 -305.61	-30.94 -31.77	0.00 0.00	0.00 0.00	0.00 0.00
	4 100.00	6.07	260.52	4 084.33	-60.30	-316.04	-32.60	0.00	0.00	0.00
	4 200.00	6.07	260.52	4 183.77 4 283.21	-62.05	-326.47	-33.42	0.00	0.00	0.00
	4 300.00 4 400.00	6.07 6.07	260.52 260.52	4 283.21	-63.79 -65.53	-336.90 -347.33	-34.25 -35.08	0.00 0.00	0.00 0.00	0.00 0.00
	4 500.00	6.07	260.52	4 482.09	-67.27	-357.76	-35.06	0.00	0.00	0.00
	4 600.00	6.07	260.52	4 581.53	-69.01	-368.19	-36.73	0.00	0.00	0.00
	4 700.00 4 800.00	6.07 6.07	260.52 260.52	4 680.97 4 780.41	-70.75 -72.49	-378.62 -389.05	-37.56 -38.39	0.00 0.00	0.00 0.00	0.00 0.00
	4 900.00	6.07	260.52	4 879.85	-72.49 -74.23	-399.48	-36.39 -39.22	0.00	0.00	0.00
	5 000.00	6.07	260.52	4 979.29	-75.98	-409.91	-40.05	0.00	0.00	0.00
	5 100.00 5 200.00	6.07 6.07	260.52 260.52	5 078.72 5 178.16	-77.72 -79.46	-420.34 -430.77	-40.87 -41.70	0.00 0.00	0.00 0.00	0.00 0.00
	5 300.00	6.07	260.52 260.52	5 178.16	-79.46 -81.20	-430.77 -441.20	-41.70 -42.53	0.00	0.00	0.00
	5 400.00	6.07	260.52	5 377.04	-82.94	-451.63	-42.33	0.00	0.00	0.00
	5 500.00	6.07	260.52	5 476.48	-84.68	-462.06	-44.19	0.00	0.00	0.00
_										
T/	<b>rona</b> 5 562.65	6.07	260.52	5 538.78	-85.77	-468.60	-44.70	0.00	0.00	0.00

5/14/2014 12:18:33PM Page 3 COMPASS 5000.1 Build 56



Site:

## Weatherford International Ltd.

## Planning Report



**Weatherford** 

 Database:
 EDM 5000.1 Single User Db

 Company:
 NEWFIELD EXPLORATION CO.

 Project:
 DUCHESNE COUNTY, UT

UTE TRIBAL 13 and 14-9-4-3-2WH PAD

Well: UTE TRIBAL 13-9-4-3-2WH
Wellbore: UTE TRIBAL 13-9-4-3-2WH

Design: Design #2

Local Co-ordinate Reference:

TVD Reference: MD Reference: North Reference:

Survey Calculation Method:

Well UTE TRIBAL 13-9-4-3-2WH WELL @ 5284.00ft (Pioneer 78) WELL @ 5284.00ft (Pioneer 78)

Minimum Curvature

urvey Calculation Method.

ned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
5 600.00	6.07	260.52	5 575.92	-86.42	-472.49	-45.01	0.00	0.00	0.00
Mahogany									
5 605.86	6.07	260.52	5 581.74	-86.53	-473.11	-45.06	0.00	0.00	0.00
5 700.00	6.07	260.52	5 675.36	-88.17	-482.92	-45.84	0.00	0.00	0.00
5 800.00	6.07	260.52	5 774.80	-89.91	-493.35	-46.67	0.00	0.00	0.00
5 900.00	6.07	260.52	5 874.24	-91.65	-503.78	-47.50	0.00	0.00	0.00
6 000.00	6.07	260.52	5 973.68	-93.39	-514.21	-48.33	0.00	0.00	0.00
6 100.00	6.07	260.52	6 073.12	-95.13	-524.64	-49.15	0.00	0.00	0.00
6 200.00	6.07	260.52	6 172.56	-96.87	-535.07	-49.98	0.00	0.00	0.00
6 300.00	6.07	260.52	6 272.00	-98.61	-545.50	-50.81	0.00	0.00	0.00
6 400.00	6.07	260.52	6 371.44	-100.36	-555.93	-51.64	0.00	0.00	0.00
	lch Member								
6 464.94	6.07	260.52	6 436.02	-101.49	-562.71	-52.18	0.00	0.00	0.00
6 500.00	6.07	260.52	6 470.88	-102.10	-566.36	-52.47	0.00	0.00	0.00
6 600.00	6.07	260.52	6 570.31	-103.84	-576.79	-53.29	0.00	0.00	0.00
6 700.00	6.07	260.52	6 669.75	-105.58	-587.22	-54.12	0.00	0.00	0.00
Garden Gu	lch Member-1								
6 720.16	6.07	260.52	6 689.80	-105.93	-589.33	-54.29	0.00	0.00	0.00
6 800.00	6.07	260.52	6 769.19	-107.32	-597.65	-54.95	0.00	0.00	0.00
	lch Member-2								
6 876.90	6.07	260.52	6 845.67	-108.66	-605.68	-55.59	0.00	0.00	0.00
6 900.00	6.07	260.52	6 868.63	-109.06	-608.08	-55.78	0.00	0.00	0.00
7 000.00	6.07	260.52	6 968.07	-110.80	-618.51	-56.60	0.00	0.00	0.00
7 100.00	6.07	260.52	7 067.51	-112.55	-628.94	-57.43	0.00	0.00	0.00
7 200.00	6.07	260.52	7 166.95	-114.29	-639.37	-58.26	0.00	0.00	0.00
7 300.00	6.07	260.52	7 266.39	-116.03	-649.80	-59.09	0.00	0.00	0.00
7 400.00	6.07	260.52	7 365.83	-117.77	-660.23	-59.92	0.00	0.00	0.00
7 500.00	6.07	260.52	7 465.27	-119.51	-670.66	-60.74	0.00	0.00	0.00
Douglas C	reek Member								
7 550.11	6.07	260.52	7 515.09	-120.38	-675.89	-61.16	0.00	0.00	0.00
7 600.00	6.07	260.52	7 564.71	-121.25	-681.09	-61.57	0.00	0.00	0.00
7 700.00	6.07	260.52	7 664.15	-122.99	-691.52	-62.40	0.00	0.00	0.00
7 800.00 7 900.00	6.07	260.52	7 763.59	-124.74	-701.95	-63.23	0.00	0.00	0.00
7 900.00	6.07	260.52	7 863.03	-126.48	-712.38	-64.06	0.00	0.00	0.00
Start DLS 5	5.00 TFO 113.88								
8 007.62	6.07	260.52	7 970.04	-128.35	-723.61	-64.95	0.00	0.00	0.00
8 100.00	5.95	305.78	8 061.96	-126.36	-732.32	-62.20	5.00	-0.13	48.99
8 200.00	9.04	336.91	8 161.14	-116.09	-739.61	-51.34	5.00	3.09	31.14
B Limestor		0.47.50	0.000.07	400.40	740.40	20.45	F 00	4.00	4475
8 272.16 8 300.00	12.09 13.34	347.56 350.35	8 232.07 8 259.23	-103.48 -97.47	-743.46 -744.63	-38.45 -32.35	5.00 5.00	4.22 4.49	14.75 10.00
		550.55	0 239.23	-31.41	-144.00	-52.55	3.00	4.43	10.00
Lower Blac									
8 387.57	17.41	356.48	8 343.65	-74.42	-747.13	-9.17	5.00	4.65	7.01
8 400.00	18.00	357.13	8 355.49	-70.64	-747.34	-5.39	5.00	4.74	5.23
Start Build		250.04	0.005.04	F7.00	747.70	0.00	F 00	4 77	4.57
8 441.83	20.00	359.04	8 395.04	-57.03	-747.78	8.20	5.00	4.77	4.57
9 5/8"	20.05	250.04	0.200.00	F. 0.	747.00	0.00	0.00	0.00	0.00
8 444.98 8 450.00	20.25	359.04 359.04	8 398.00 8 402.70	-55.95 54.20	-747.80 747.83	9.28	8.00	8.00	0.00
8 450.00	20.65	359.04		-54.20	-747.83	11.03	8.00	8.00	0.00
8 500.00	24.65	359.04	8 448.83	-34.94	-748.15	30.24	8.00	8.00	0.00
	k Limestone								
8 502.20	24.83	359.04	8 450.84	-34.02	-748.17	31.16	8.00	8.00	0.00
8 550.00	28.65	359.04	8 493.51	-12.52	-748.52	52.61	8.00	8.00	0.00

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## Weatherford International Ltd.

Planning Report



**Weatherford** 

Database: EDM 5000.1 Single User Db
Company: NEWFIELD EXPLORATION CO.
Project: DUCHESNE COUNTY, UT
Site: UTE TRIBAL 13 and 14-9-4-3-2WH PAD

Well: UTE TRIBAL 13-9-4-3-2WH

Wellbore: UTE TRIBAL 13-9-4-3-2WH

Design: Design #2

Local Co-ordinate Reference: TVD Reference: MD Reference:

Survey Calculation Method:

North Reference:

Well UTE TRIBAL 13-9-4-3-2WH WELL @ 5284.00ft (Pioneer 78) WELL @ 5284.00ft (Pioneer 78)

Minimum Curvature

1:	Design #2								
ned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
8 600.00 8 650.00		359.04 359.04	8 536.52 8 577.64	12.96 41.38	-748.95 -749.42	78.03 106.39	8.00 8.00	8.00 8.00	0.00 0.00
CP LIMES	00.40	050.04	0.004.05	22.22	740.74	405.05	2.22	2.22	0.00
8 680.80 8 700.00	40.65	359.04 359.04	8 601.95 8 616.68	60.29 72.60	-749.74 -749.94	125.25 137.53	8.00 8.00	8.00 8.00	0.00 0.00
8 712.45		359.04	8 626.06	80.79	-750.08	145.71	8.00	8.00	0.00
8 750.00		359.04	8 653.44	106.47	-750.51	171.32	8.00	8.00	0.00
8 800.00		359.04	8 687.76	142.82	-751.12	207.58	8.00	8.00	0.00
8 850.00		359.04	8 719.45	181.47	-751.76	246.15	8.00	8.00	0.00
8 900.00		359.04	8 748.37	222.24	-752.44	286.82	8.00	8.00	0.00
Uteland Bu		250.04	0.704.07	0.47.40	750.00	044.70	0.00	0.00	0.00
8 929.48		359.04	8 764.07	247.19	-752.86	311.72	8.00	8.00	0.00
8 950.00		359.04	8 774.38	264.92	-753.15	329.41	8.00	8.00	0.00
Uteland Bu		0=0.04	0.700.05	070.04	750.00	0.10.77	2.25	2.25	2.22
8 963.00	61.69	359.04	8 780.65	276.31	-753.34	340.77	8.00	8.00	0.00
Uteland Bu	utte 'B'								
8 995.01		359.04	8 795.19	304.82	-753.82	369.21	8.00	8.00	0.00
9 000.00		359.04	8 797.34	309.32	-753.89	373.70	8.00	8.00	0.00
9 050.00		359.04	8 817.15	355.21	-754.66	419.48	8.00	8.00	0.00
Uteland Bu	utte 'C'								
9 076.23		359.04	8 826.25	379.81	-755.07	444.03	8.00	8.00	0.00
9 100.00	72.65	359.04	8 833.71	402.37	-755.44	466.53	8.00	8.00	0.00
Haland D.									
9 125.11	utte 'C PZ1'	359.04	8 840.78	406.47	755.05	490.57	9.00	8.00	0.00
9 150.00		359.04	8 846.94	426.47 450.57	-755.85 -756.25	514.62	8.00 8.00	8.00	0.00
9 200.00		359.04	8 856.78	499.58	-757.07	563.51	8.00	8.00	0.00
9 250.00		359.04	8 863.17	549.15	-757.89	612.97	8.00	8.00	0.00
	.07 hold at 9278.09						2.23	2.23	
9 278.09		359.04	8 865.24	577.15	-758.36	640.91	8.00	8.00	0.00
9 300.00		359.04	8 866.43	599.03	-758.72	662.74	0.00	0.00	0.00
9 400.00		359.04	8 871.83	698.87	-760.39	762.34	0.00	0.00	0.00
9 500.00		359.04 359.04	8 877.24 8 882.65	798.71 898.55	-762.06 -763.72	861.95 961.56	0.00 0.00	0.00	0.00
9 600.00 9 700.00		359.04 359.04	8 888.06	998.39	-765.72 -765.39	961.56 1 061.16	0.00	0.00 0.00	0.00 0.00
9 800.00		359.04	8 893.46	1 098.23	-767.05	1 160.77	0.00	0.00	0.00
9 900.00		359.04	8 898.87	1 198.07	-768.72	1 260.38	0.00	0.00	0.00
10 000.00		359.04	8 904.28	1 297.91	-770.38	1 359.98	0.00	0.00	0.00
10 100.00		359.04	8 909.69	1 397.75	-772.05	1 459.59	0.00	0.00	0.00
10 200.00	86.90	359.04	8 915.10	1 497.59	-773.71	1 559.20	0.00	0.00	0.00
10 300.00	86.90	359.04	8 920.50	1 597.43	-775.38	1 658.80	0.00	0.00	0.00
10 400.00		359.04	8 925.91	1 697.27	-777.04	1 758.41	0.00	0.00	0.00
10 500.00		359.04	8 931.32	1 797.11	-778.71	1 858.01	0.00	0.00	0.00
10 600.00		359.04	8 936.73	1 896.95	-780.37	1 957.62	0.00	0.00	0.00
10 700.00	86.90	359.04	8 942.14	1 996.79	-782.04	2 057.23	0.00	0.00	0.00
10 800.00	86.90	359.04	8 947.54	2 096.63	-783.70	2 156.83	0.00	0.00	0.00
10 900.00		359.04	8 952.95	2 196.47	-785.37	2 256.44	0.00	0.00	0.00
11 000.00	86.90	359.04	8 958.36	2 296.31	-787.04	2 356.05	0.00	0.00	0.00
11 100.00	86.90	359.04	8 963.77	2 396.15	-788.70	2 455.65	0.00	0.00	0.00
11 200.00	86.90	359.04	8 969.17	2 495.99	-790.37	2 555.26	0.00	0.00	0.00
11 300.00	86.90	359.04	8 974.58	2 595.83	-792.03	2 654.87	0.00	0.00	0.00
11 400.00		359.04	8 979.99	2 695.67	-793.70	2 754.47	0.00	0.00	0.00
11 500.00		359.04	8 985.40	2 795.51	-795.36	2 854.08	0.00	0.00	0.00

5/14/2014 12:18:33PM Page 5 COMPASS 5000.1 Build 56



## Weatherford International Ltd.

## Planning Report



Weatherford<sup>®</sup>

EDM 5000.1 Single User Db Database: Company: NEWFIELD EXPLORATION CO. Project: DUCHESNE COUNTY, UT Site:

UTE TRIBAL 13 and 14-9-4-3-2WH PAD

Well: UTE TRIBAL 13-9-4-3-2WH UTE TRIBAL 13-9-4-3-2WH Wellbore:

Design: Design #2 Local Co-ordinate Reference: TVD Reference:

MD Reference: North Reference:

**Survey Calculation Method:** 

Well UTE TRIBAL 13-9-4-3-2WH WELL @ 5284.00ft (Pioneer 78) WELL @ 5284.00ft (Pioneer 78)

Minimum Curvature

ocoigii.									
Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
11 600.00	86.90	359.04	8 990.81	2 895.35	-797.03	2 953.69	0.00	0.00	0.00
11 700.00	86.90	359.04	8 996.21	2 995.19	-798.69	3 053.29	0.00	0.00	0.00
11 800.00	86.90	359.04	9 001.62	3 095.03	-800.36	3 152.90	0.00	0.00	0.00
11 900.00	86.90	359.04	9 007.03	3 194.87	-802.02	3 252.50	0.00	0.00	0.00
12 000.00	86.90	359.04	9 012.44	3 294.71	-803.69	3 352.11	0.00	0.00	0.00
12 100.00	86.90	359.04	9 017.85	3 394.55	-805.35	3 451.72	0.00	0.00	0.00
12 200.00	86.90	359.04	9 023.25	3 494.39	-807.02	3 551.32	0.00	0.00	0.00
12 300.00	86.90	359.04	9 028.66	3 594.23	-808.68	3 650.93	0.00	0.00	0.00
12 400.00	86.90	359.04	9 034.07	3 694.07	-810.35	3 750.54	0.00	0.00	0.00
12 500.00	86.90	359.04	9 039.48	3 793.91	-812.01	3 850.14	0.00	0.00	0.00
12 600.00	86.90	359.04	9 044.89	3 893.75	-813.68	3 949.75	0.00	0.00	0.00
12 700.00	86.90	359.04	9 050.29	3 993.59	-815.35	4 049.36	0.00	0.00	0.00
12 800.00	86.90	359.04	9 055.70	4 093.43	-817.01	4 148.96	0.00	0.00	0.00
12 900.00	86.90	359.04	9 061.11	4 193.27	-818.68	4 248.57	0.00	0.00	0.00
13 000.00	86.90	359.04	9 066.52	4 293.11	-820.34	4 348.18	0.00	0.00	0.00
13 100.00	86.90	359.04	9 071.92	4 392.95	-822.01	4 447.78	0.00	0.00	0.00
13 200.00	86.90	359.04	9 077.33	4 492.79	-823.67	4 547.39	0.00	0.00	0.00
13 300.00	86.90	359.04	9 082.74	4 592.63	-825.34	4 647.00	0.00	0.00	0.00
13 400.00	86.90	359.04	9 088.15	4 692.47	-827.00	4 746.60	0.00	0.00	0.00
13 500.00	86.90	359.04	9 093.56	4 792.31	-828.67	4 846.21	0.00	0.00	0.00
13 600.00	86.90	359.04	9 098.96	4 892.14	-830.33	4 945.81	0.00	0.00	0.00
13 700.00	86.90	359.04	9 104.37	4 991.98	-832.00	5 045.42	0.00	0.00	0.00
13 800.00	86.90	359.04	9 109.78	5 091.82	-833.66	5 145.03	0.00	0.00	0.00
13 900.00	86.90	359.04	9 115.19	5 191.66	-835.33	5 244.63	0.00	0.00	0.00
14 000.00	86.90	359.04	9 120.60	5 291.50	-836.99	5 344.24	0.00	0.00	0.00
14 100.00	86.90	359.04	9 126.00	5 391.34	-838.66	5 443.85	0.00	0.00	0.00
14 200.00	86.90	359.04	9 131.41	5 491.18	-840.33	5 543.45	0.00	0.00	0.00
14 300.00	86.90	359.04	9 136.82	5 591.02	-841.99	5 643.06	0.00	0.00	0.00
14 400.00	86.90	359.04	9 142.23	5 690.86	-843.66	5 742.67	0.00	0.00	0.00
14 500.00	86.90	359.04	9 147.63	5 790.70	-845.32	5 842.27	0.00	0.00	0.00
14 600.00	86.90	359.04	9 153.04	5 890.54	-846.99	5 941.88	0.00	0.00	0.00
14 700.00	86.90	359.04	9 158.45	5 990.38	-848.65	6 041.49	0.00	0.00	0.00
14 800.00	86.90	359.04	9 163.86	6 090.22	-850.32	6 141.09	0.00	0.00	0.00
14 900.00	86.90	359.04	9 169.27	6 190.06	-851.98	6 240.70	0.00	0.00	0.00
15 000.00	86.90	359.04	9 174.67	6 289.90	-853.65	6 340.30	0.00	0.00	0.00
15 100.00	86.90	359.04	9 180.08	6 389.74	-855.31	6 439.91	0.00	0.00	0.00
15 200.00	86.90	359.04	9 185.49	6 489.58	-856.98	6 539.52	0.00	0.00	0.00
15 300.00	86.90	359.04	9 190.90	6 589.42	-858.64	6 639.12	0.00	0.00	0.00
15 400.00	86.90	359.04	9 196.31	6 689.26	-860.31	6 738.73	0.00	0.00	0.00
15 500.00	86.90	359.04	9 201.71	6 789.10	-861.97	6 838.34	0.00	0.00	0.00
15 600.00	86.90	359.04	9 207.12	6 888.94	-863.64	6 937.94	0.00	0.00	0.00
15 700.00	86.90	359.04	9 212.53	6 988.78	-865.31	7 037.55	0.00	0.00	0.00
15 800.00	86.90	359.04	9 217.94	7 088.62	-866.97	7 137.16	0.00	0.00	0.00
15 900.00	86.90	359.04 359.04	9 223.35	7 188.46	-868.64	7 236.76	0.00	0.00	0.00
16 000.00	86.90	359.04	9 228.75	7 288.30	-870.30	7 336.37	0.00	0.00	0.00
16 100.00	86.90	359.04	9 234.16	7 388.14	-871.97	7 435.98	0.00	0.00	0.00
16 200.00	86.90	359.04	9 239.57	7 487.98	-873.63	7 535.58	0.00	0.00	0.00
16 300.00	86.90	359.04	9 244.98	7 587.82	-875.30	7 635.19	0.00	0.00	0.00
16 400.00	86.90	359.04 359.04	9 244.98	7 687.82 7 687.66	-875.30 -876.96	7 734.80	0.00	0.00	0.00
16 500.00	86.90	359.04	9 255.79	7 787.50	-878.63	7 834.40	0.00	0.00	0.00
16 600.00	86.90	359.04	9 261.20	7 887.34	-880.29	7 934.40	0.00	0.00	0.00
16 700.00	86.90	359.04	9 266.61	7 987.18	-881.96	8 033.61	0.00	0.00	0.00
16 800.00	86.90	359.04	9 272.02	8 087.02	-883.62	8 133.22	0.00	0.00	0.00
16 900.00	86.90	359.04	9 277.42	8 186.86	-885.29	8 232.83	0.00	0.00	0.00

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## Weatherford International Ltd.

## Planning Report



**Weatherford**<sup>®</sup>

EDM 5000.1 Single User Db Database: Company: NEWFIELD EXPLORATION CO. Project: DUCHESNE COUNTY, UT

UTE TRIBAL 13 and 14-9-4-3-2WH PAD Site:

Well: UTE TRIBAL 13-9-4-3-2WH UTE TRIBAL 13-9-4-3-2WH Wellbore:

Design: Design #2 Local Co-ordinate Reference:

TVD Reference: MD Reference: North Reference:

**Survey Calculation Method:** 

Well UTE TRIBAL 13-9-4-3-2WH WELL @ 5284.00ft (Pioneer 78) WELL @ 5284.00ft (Pioneer 78)

Minimum Curvature

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
17 000.00	86.90	359.04	9 282.83	8 286.70	-886.95	8 332.43	0.00	0.00	0.00
17 100.00	86.90	359.04	9 288.24	8 386.54	-888.62	8 432.04	0.00	0.00	0.00
17 200.00	86.90	359.04	9 293.65	8 486.38	-890.28	8 531.65	0.00	0.00	0.00
17 300.00	86.90	359.04	9 299.06	8 586.22	-891.95	8 631.25	0.00	0.00	0.00
17 400.00	86.90	359.04	9 304.46	8 686.06	-893.62	8 730.86	0.00	0.00	0.00
17 500.00	86.90	359.04	9 309.87	8 785.90	-895.28	8 830.47	0.00	0.00	0.00
17 600.00	86.90	359.04	9 315.28	8 885.74	-896.95	8 930.07	0.00	0.00	0.00
17 700.00	86.90	359.04	9 320.69	8 985.58	-898.61	9 029.68	0.00	0.00	0.00
17 800.00	86.90	359.04	9 326.10	9 085.42	-900.28	9 129.29	0.00	0.00	0.00
17 900.00	86.90	359.04	9 331.50	9 185.26	-901.94	9 228.89	0.00	0.00	0.00
18 000.00	86.90	359.04	9 336.91	9 285.10	-903.61	9 328.50	0.00	0.00	0.00
18 100.00	86.90	359.04	9 342.32	9 384.93	-905.27	9 428.10	0.00	0.00	0.00
18 200.00	86.90	359.04	9 347.73	9 484.77	-906.94	9 527.71	0.00	0.00	0.00
18 300.00	86.90	359.04	9 353.13	9 584.61	-908.60	9 627.32	0.00	0.00	0.00
18 400.00	86.90	359.04	9 358.54	9 684.45	-910.27	9 726.92	0.00	0.00	0.00
18 500.00	86.90	359.04	9 363.95	9 784.29	-911.93	9 826.53	0.00	0.00	0.00
18 600.00	86.90	359.04	9 369.36	9 884.13	-913.60	9 926.14	0.00	0.00	0.00
18 700.00	86.90	359.04	9 374.77	9 983.97	-915.26	10 025.74	0.00	0.00	0.00
18 800.00 18 900.00 19 000.00 19 100.00	86.90 86.90 86.90	359.04 359.04 359.04 359.04	9 380.17 9 385.58 9 390.99 9 396.40	10 083.81 10 183.65 10 283.49 10 383.33	-916.93 -918.60 -920.26 -921.93	10 125.35 10 224.96 10 324.56 10 424.17	0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00
	hold at 19187.15		0.404.44	40.470.04	000.00	40.540.00	0.00	0.00	0.00
19 187.15	86.90	359.04	9 401.11	10 470.34	-923.38	10 510.98	0.00	0.00	0.00
19 200.00	86.90	359.04	9 401.81	10 483.17	-923.59	10 523.78	0.00	0.00	0.00
19 300.00	86.90	359.04	9 407.21	10 583.01	-925.26	10 623.38	0.00	0.00	0.00
TD at 19322.									
19 322.15	86.90	359.04	9 408.41	10 605.13	-925.63	10 645.45	0.00	0.00	0.00

Design Targets									
Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (usft)	Easting (usft)	Latitude	Longitude
8° CURVE UTLAND BU - plan hits target cer - Rectangle (sides V		359.04 D9 909.06)	8 865.24	577.15	-758.36	7 255 507.51	2 025 224.25	40° 13' 48.384 N	110° 7' 18.078 W
PBHL UTE TRIBAL 13-9 - plan misses target - Point		0.00 oft at 19187.	9 401.05 15ft MD (940	10 470.34 01.11 TVD, 104	-923.38 170.34 N, -923	7 265 396.95 3.38 E)	2 024 906.51	40° 15′ 26.155 N	110° 7' 20.211 W
135' PAST PBHL UTE TI - plan misses target - Point		0.00 6ft at 19322.	9 408.35 15ft MD (940	10 605.13 08.41 TVD, 100	-925.63 605.13 N, -928	7 265 531.69 5.63 E)	2 024 902.18	40° 15' 27.487 N	110° 7' 20.240 W

Casing Points						
	Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (")	Hole Diameter (")	
	8 444.98 1 615.00	8 398.00 1 612.90		9-5/8 13-3/8	12-1/4 17-1/2	



## **Weatherford International Ltd.**

## Planning Report



**Weatherford** 

Database: EDM 5000.1 Single User Db
Company: NEWFIELD EXPLORATION CO.
Project: DUCHESNE COUNTY, UT

Site: UTE TRIBAL 13 and 14-9-4-3-2WH PAD

Well: UTE TRIBAL 13-9-4-3-2WH
Wellbore: UTE TRIBAL 13-9-4-3-2WH

Design: Design #2

Local Co-ordinate Reference: TVD Reference: MD Reference: North Reference: Survey Calculation Method: Well UTE TRIBAL 13-9-4-3-2WH WELL @ 5284.00ft (Pioneer 78) WELL @ 5284.00ft (Pioneer 78)

Minimum Curvature

rmations						
	Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
	2 015.77	2 013.00	Usable Water		3.10	359.04
	3 609.36	3 599.00	Green River Formation		3.10	359.04
	5 562.65	5 543.00	Trona		3.10	359.04
	5 605.86	5 586.00	Mahogany Bench		3.10	359.04
	6 464.94	6 441.00	Garden Gulch Member		3.10	359.04
	6 720.16	6 695.00	Garden Gulch Member-1		3.10	359.04
	6 876.90	6 851.00	Garden Gulch Member-2		3.10	359.04
	7 550.11	7 521.00	Douglas Creek Member		3.10	359.04
	8 272.16	8 237.00	B Limestone		3.10	359.04
	8 387.57	8 347.00	Lower Black Shale		3.10	359.04
	8 502.20	8 452.00	Castle Peak Limestone		3.10	359.04
	8 680.80	8 598.00	CP LIMES		3.10	359.04
	8 712.45	8 621.00	CP LIMES_2		3.10	359.04
	8 929.48	8 750.00	Uteland Butte		3.10	359.04
	8 963.00	8 765.00	Uteland Butte 'A'		3.10	359.04
	8 995.01	8 778.00	Uteland Butte 'B'		3.10	359.04
	9 076.23	8 805.00	Uteland Butte 'C'		3.10	359.04
	9 125.11	8 817.00	Uteland Butte 'C PZ1'		3.10	359.04

Plan Annotations					
Me	asured	Vertical	Local Coor	dinates	
	Depth (ft)	Depth (ft)	+N/-S (ft)	+E/-W (ft)	Comment
	1 574.00	1 572.00	-17.38	-58.15	Start 126.00 hold at 1574.00 MD
	1 700.00	1 697.71	-18.67	-66.55	Start DLS 5.00 TFO -2.14
	1 744.02	1 741.56	-19.28	-70.32	Start 6263.60 hold at 1744.02 MD
	8 007.62	7 970.04	-128.35	-723.61	Start DLS 5.00 TFO 113.88
	8 441.83	8 395.04	-57.03	-747.78	Start Build 8.00
	9 278.09	8 865.24	577.15	-758.36	Start 9909.07 hold at 9278.09 MD
1	9 187.15	9 401.11	10 470.34	-923.38	Start 135.00 hold at 19187.15 MD
1	9 322.15	9 408.41	10 605.13	-925.63	TD at 19322.15

5/14/2014 12:18:33PM Page 8 COMPASS 5000.1 Build 56



## **NEWFIELD EXPLORATION CO.**

DUCHESNE COUNTY, UT
UTE TRIBAL 13 and 14-9-4-3-2WH PAD
UTE TRIBAL 13-9-4-3-2WH

UTE TRIBAL 13-9-4-3-2WH Design #2

## **Anticollision Report**

14 May, 2014





#### Weatherford International Ltd.

### Anticollision Report



Weatherford

NEWFIELD EXPLORATION CO. Company: Project: DUCHESNE COUNTY. UT

UTE TRIBAL 13 and 14-9-4-3-2WH PAD Reference Site:

Site Error: 0.00 ft

Reference Well: UTE TRIBAL 13-9-4-3-2WH

Well Error: 0.00 ft

Reference Wellbore UTE TRIBAL 13-9-4-3-2WH

Reference Design: Design #2 Local Co-ordinate Reference:

Well UTE TRIBAL 13-9-4-3-2WH TVD Reference: WELL @ 5284.00ft (Pioneer 78) MD Reference: WELL @ 5284.00ft (Pioneer 78)

North Reference: True

Minimum Curvature Survey Calculation Method: 2.00 sigma

Output errors are at Database: EDM 5000.1 Single User Db

Offset TVD Reference: Offset Datum

Reference Design #2

Filter type: NO GLOBAL FILTER: Using user defined selection & filtering criteria

Interpolation Method: MD Interval 100.00ft Error Model: **ISCWSA** 

Depth Range: Unlimited Scan Method: Closest Approach 3D Results Limited by: Maximum center-center distance of 2 132.22 ft Error Surface: Elliptical Conic Warning Levels Evaluated at: 2.00 Sigma Casing Method: Not applied

Date 5/14/2014 Survey Tool Program From То (ft) Survey (Wellbore) **Tool Name** Description (ft) 19 322.15 Design #2 (UTE TRIBAL 13-9-4-3-2WH) MWD MWD - Standard 1 574.00

Summary						
Site Name Offset Well - Wellbore - Design	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Dista Between Centres (ft)	nce Between Ellipses (ft)	Separation Factor	Warning
EXISTING 14-9-3-2W						
EXISTING 14-9-3-2W - EXISTING 14-9-3-2W - EXISTIN EXISTING 14-9-3-2W - EXISTING 14-9-3-2W - EXISTIN	1 574.00 9 700.00	1 570.88 8 888.06	771.05 1 085.26	767.89 1 040.52	244.026 CC, ES 24.257 SF	
UTE TRIBAL 13 and 14-9-4-3-2WH PAD						
UTE TRIBAL 14-9-4-3-2WH - UTE TRIBAL 14-9-4-3-2WH UTE TRIBAL 14-9-4-3-2WH - UTE TRIBAL 14-9-4-3-2WH	1 574.00 19 322.15	1 569.00 19 299.63	115.53 1 269.85	858.25	3.085 SF	

Offset Design EXISTING 14-9-3-2W - EXISTING 14-9-3-2W - EXISTING 14-9-3-2W								Offset Site Error:	0.00 ft					
Survey Prog	ram: 104-	-MWD											Offset Well Error:	0.00 ft
Refer	ence	Offse	et	Semi Major	Axis				Dista	ince				
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore +N/-S (ft)	e Centre +E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning	
1 574.00	1 572.00	1 570.88	1 570.75	0.00	3.16	123.86	680.16	270.40	771.05	767.89	3.16	244.026	CC. ES	
1 600.00	1 597.94	1 596.43	1 596.30	0.17	3.22	123.97	680.14	270.46	772.03	768.79	3.25	237.902		
1 700.00	1 697.71	1 698.32	1 698.19	0.31	3.43	124.39	680.20	270.50	775.90	772.19	3.71	209.339		
1 800.00	1 797.23	1 797.78	1 797.65	0.58	3.64	125.68	680.01	270.61	781.42	777.24	4.18	186.790		
1 900.00	1 896.67	1 898.07	1 897.94	0.88	3.85	126.32	679.63	270.64	787.33	782.66	4.67	168.620		
2 000.00	1 996.11	1 994.32	1 994.19	1.19	4.05	126.93	679.46	270.67	793.52	788.37	5.15	154.216		
2 100.00	2 095.54	2 092.01	2 091.87	1.49	4.25	127.52	679.66	270.73	800.15	794.53	5.62	142.290		
2 200.00	2 194.98	2 192.68	2 192.54	1.79	4.46	128.11	679.80	270.73	806.77	800.67	6.11	132.104		
2 300.00	2 294.42	2 289.52	2 289.38	2.09	4.67	128.63	680.42	270.23	813.67	807.09	6.58	123.620		
2 400.00	2 393.86	2 389.37	2 389.23	2.39	4.87	129.17	681.11	269.96	820.80	813.73	7.06	116.236		
2 500.00	2 493.30	2 489.30	2 489.15	2.70	5.08	129.71	681.54	269.75	827.81	820.27	7.54	109.793		
2 600.00	2 592.74	2 589.61	2 589.47	3.00	5.29	130.25	682.01	269.68	834.99	826.97	8.02	104.128		
2 700.00	2 692.18	2 692.29	2 692.15	3.30	5.51	130.81	682.02	269.65	841.88	833.37	8.50	99.030		
2 800.00	2 791.62	2 790.97	2 790.83	3.60	5.71	131.35	681.84	269.57	848.65	839.68	8.97	94.582		
2 900.00	2 891.06	2 889.13	2 888.99	3.91	5.92	131.87	681.83	269.60	855.71	846.26	9.44	90.620		
3 000.00	2 990.50	2 989.02	2 988.88	4.21	6.13	132.40	681.84	269.69	862.88	852.96	9.92	87.014		
3 100.00	3 089.94	3 087.80	3 087.66	4.51	6.34	132.92	681.77	269.87	870.11	859.72	10.39	83.767		
3 200.00	3 189.38	3 188.00	3 187.86	4.81	6.55	133.45	681.66	270.13	877.42	866.56	10.86	80.806		
3 300.00	3 288.82	3 287.43	3 287.28	5.12	6.75	133.94	681.66	270.13	884.75	873.42	11.33	78.117		
3 400.00	3 388.26	3 386.34	3 386.19	5.42	6.96	134.44	681.57	270.35	892.19	880.39	11.79	75.651		
3 500.00	3 487.70	3 487.16	3 487.02	5.72	7.17	134.91	681.70	270.10	899.61	887.34	12.26	73.358		



#### Weatherford International Ltd.

### Anticollision Report



Weatherford

Company: NEWFIELD EXPLORATION CO. Project: DUCHESNE COUNTY, UT

UTE TRIBAL 13 and 14-9-4-3-2WH PAD Reference Site:

Site Error: 0.00 ft

Reference Well: UTE TRIBAL 13-9-4-3-2WH

Well Error: 0.00 ft

UTE TRIBAL 13-9-4-3-2WH Reference Wellbore

Reference Design: Design #2 Local Co-ordinate Reference:

Well UTE TRIBAL 13-9-4-3-2WH TVD Reference: WELL @ 5284.00ft (Pioneer 78) WELL @ 5284.00ft (Pioneer 78) MD Reference:

True North Reference:

**Survey Calculation Method:** Minimum Curvature

Output errors are at 2.00 sigma

EDM 5000.1 Single User Db Database:

Offset TVD Reference: Offset Datum

Part	Offset De	sign	EXISTIN	NG 14-9-3	3-2W - EXIS	TING 14	-9-3-2W - EX	KISTING 14-9-	3-2W - EXI	STING 14	-9-3-2W			Offset Site Error:	0.00 ft
New No.   Process   Proc														Offset Well Error:	0.00 ft
					-		III ab at da	000	. 0				0		
No.					Reference	Offset	•							Warning	
Mathematical Content		-		-	(ft)	(ft)									
1800.00   3786.01   3786.01   3786.01   3786.04   0.83   7.00   19.27   0.81.02   0.801.05   0.801.01   0.801.00   0.81.00	3 600.00	3 587.13	3 585.78	3 585.63	6.02	7.38	135.37	681.80	269.90	907.09	894.36	12.73	71.268		
Month   Mont	3 700.00	3 686.57	3 686.56	3 686.41	6.33	7.59	135.83	681.81	269.85	914.64	901.45	13.20	69.314		
	3 800.00	3 786.01	3 789.18	3 789.04	6.63	7.80	136.27	681.89	269.12	921.91	908.24	13.67	67.461		
1	3 900.00	3 885.45	3 887.51	3 887.35	6.93	8.01	136.69	681.69	268.58	929.11	914.98	14.13	65.764		
4 200.00   4183.77   4.212.64   4.212.48   7.84   8.89   138.11   680.37   297.58   981.32   935.76   15.57   61.107   4.900.00   4.283.21   4.383.80   4.											922.07				
40000   48852   48964   489136   489136   489136   484   4868   138.44   4908   138.64   679330   206.53   697230   69130   1644   68.682     450000   48820   48686   48686   48687   875   9.27   13927   67928   206.15   697219   59528   1690   57.624     450000   48820   48696   48697   48696   9.67   13965   67701   205.95   207938   50224   1735   58.485     470000   48820   487968   47747   9.55   9.27   13927   48696   48697   48796   48796   47747   9.55   48796   48796   48796   48796   48797   48796   48797   48696   48697   48796   48797   4	4 100.00	4 084.33	4 082.86	4 082.71	7.54	8.42	137.57	681.41	268.63	944.45	929.41	15.05	62.760		
40000   48852   48964   489136   489136   489136   484   4868   138.44   4908   138.64   679330   206.53   697230   69130   1644   68.682     450000   48820   48686   48686   48687   875   9.27   13927   67928   206.15   697219   59528   1690   57.624     450000   48820   48696   48697   48696   9.67   13965   67701   205.95   207938   50224   1735   58.485     470000   48820   487968   47747   9.55   9.27   13927   48696   48697   48796   48796   47747   9.55   48796   48796   48796   48796   48797   48796   48797   48696   48697   48796   48797   4	4 200 00	4 183 77	4 212 64	4 212 48	7 84	8 69	138 11	680.37	267 58	951.32	935 75	15.57	61 107		
4-9000   4-980   4-980   4-980   4-980   4-980   5-92   10-92   6-78   4-90   2-96   5-96															
1,000   4,816.53   4,800.88   4,804.49   0.05   9.47   130.65   6,773.01   265.65   979.89   802.54   17.35   54.465   4,700.00   4,800.37   4,707.60   4,774.77   0.55   0.883   140.45   6,778.89   260.08   996.12   977.63   18.26   54.464   4,900.00   4,978.65   4,900.00															
4 000.00 4 080.07 4 079.86 4 079.47 9.05 9.07 140.05 077.89 200.08 0817.0 907.17 17.80 55.401 4 000.00 4 780.41 4 779.66 4779.47 9.05 98.88 140.45 077.89 200.08 096.12 977.86 18.26 54.546 0 000.00 4 979.20 4 070.24 4070.05 10.20 10.29 141.22 077.45 206.08 100.30 985.20 177.00 18.27 52.00 0 000.00 4 079.20 4 070.24 4070.05 10.20 10.29 141.22 077.42 206.11 10.12.24 993.07 19.17 52.006 0 000.00 5 177.61 5 178.46 5 172.45 10.88 10.51 141.00 677.45 206.06 10.00.40 10.007 19.17 52.006 0 000.00 5 177.61 5 178.44 5 172.45 10.88 10.51 141.00 677.45 206.02 10.00.40 10.007 19.13 5 176 0 0 0 0 0 0 177.65 10 177.00 177.00 177.00 177.44 20.00 177.00 177.44 20.00 177															
4800.00   4780.41   4779.68   4782.47   9.65   9.88   410.45   677.88   266.08   9.61.2   977.86   13.26   54.549	4 600.00	4 581.53	4 580.68	4 580.49	9.05	9.47	139.65	678.01	265.95	979.89	962.54	17.35	56.485		
4800.00   4780.41   4779.68   4782.47   9.65   9.88   410.45   677.88   266.08   9.61.2   977.86   13.26   54.549															
\$\text{\$\frac{4}{90000}\$   \$478.85   \$482.27   \$482.08   \$9.96   \$10.10   \$140.86   \$677.45   \$266.08   \$10.39   \$985.26   \$12.72   \$52.090   \$1576.72   \$50.001   \$50.072   \$177.65   \$															
500000         4970.29         4970.29         4970.29         4970.29         10.26         10.29         141.22         677.34         286.20         10.204         993.07         19.13         528.86           500000         5078.72         5080.15         5078.94         10.56         10.51         11.10         677.74         286.20         10.204.40         10.08.40         20.08         51.207           500000         5277.60         5277.76         11.77         11.09         14.23         676.89         265.89         1.008.74         10.08.40         20.04         50.476           500000         5277.60         5277.76         11.77         11.34         14.20         676.51         266.11         10.436.85         10.23.66         20.94         40.139           500000         5675.30         5677.30         11.77         11.34         143.75         676.50         266.21         10.00.00         10.02.00         21.44         40.199           500000         5675.30         5677.40         5675.21         12.38         11.76         143.75         676.50         266.21         10.70.48         10.48.13         22.35         47.866           500000         577.80         568.00															
6 10 00         5078-72         5080.13         5078-84         10.56         10.51         14.190         677.34         286.02         1202.40         1 00.077         19.83         51.976           6 200.00         5178.16         5178.64         5178.64         10.86         10.72         14.197         677.14         265.69         1 10.824         1 0.062         20.08         51.207           5 400.00         5377.04         5376.48         5376.29         11.47         11.13         142.21         676.82         265.99         1 0.03.47         1 0.03.05         20.99         40.733           5 600.00         5375.02         5574.48         577.20         1 1.177         11.34         14.30.04         676.62         266.21         10.03.05         20.90         40.733           5 700.00         5675.32         5577.48         567.21         12.38         11.76         14.375         676.50         208.21         11.070.48         10.81.23         47.596           5 700.00         5675.33         5677.40         5677.21         12.38         11.76         14.375         676.02         265.38         10.787.44         47.276         20.20         47.276         20.20         47.276         20.20 <t< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></t<>															
\$\frac{6}{2}00.00\$ \frac{5}{178.16}\$ \frac{5}{178.64}\$ \frac{5}{178.64}\$ \frac{5}{10.86}\$ \frac{1}{10.95}\$ \frac{1}{10.95}\$ \frac{1}{14.97}\$ \frac{6}{17.14}\$ \frac{2}{2}65.89\$ \frac{1}{10.8674}\$ \frac{1}{10.86}\$ \frac{1}{0.0246}\$ \frac{5}{5}00.00\$ \frac{5}{2}77.78\$ \frac{1}{11.77}\$ \frac{1}{10.93}\$ \frac{1}{14.27}\$ \frac{6}{178.69}\$ \frac{2}{2}65.89\$ \frac{1}{10.8674}\$ \frac{1}{10.62.00}\$ \frac{2}{2}0.264\$ \frac{5}{5}0.476\$ \frac{5}{3}0.476\$ \frac{5}{3}0.276\$ \frac{1}{3}0.236\$ \frac{2}{3}0.236\$ \frac{2}{3}0.244\$ \frac{4}{4}0.139\$ \frac{5}{3}0.200\$ \frac{1}{3}0.476\$ \frac{5}{3}0.200\$ \frac{5}{3}0.200\$ \frac{1}{3}0.200\$ \frac{1}{3}0.476\$ \frac{1}{3}0.400\$ \frac{1}{3}0.200\$ \frac{1}{3}0.200\$ \frac{1}{3}0.400\$ \frac{1}{3}0.200\$ \frac{1}{3}0.200\$ \frac{1}{3}0.200\$ \frac{1}{3}0.400\$ \frac{1}{3}0.200\$ \frac{1}{3}0.200\$ \frac{1}{3}0.400\$ \frac{1}{3}0.200\$ \frac{1}{3}0.200															
5300.00         5277.00         5277.00         5277.00         5277.00         5277.00         5277.00         5277.00         5277.00         5277.00         5370.00         5277.00         5370.00         5277.00         5478.00         5477.00         5473.39         6473.39         1147         11.34         14.30         676.62         286.12         1053.00         1032.05         21.44         49.139           5600.00         5476.48         5473.89         5473.39         11.77         11.35         143.40         676.62         286.12         1053.69         1032.05         21.48         49.139           5600.00         577.40         5677.40         677.21         12.38         11.76         43.75         676.50         286.21         1070.40         10.82.09         12.89         42.20         48.61         48.61         10.82.09         12.23         48.66         48.72.00         48.72.72         48.66         78.72.00         48.72.72         48.66         78.72.00         48.72.72         48.66         78.72.00         48.72.00         48.72.72         48.66         78.72.00         48.72.72         48.66         78.72.00         48.72.72         48.66         78.72.00         48.72.72         48.66         78.72.00	5 100.00	5 0/8./2	5 080.13	5 0/9.94	10.56	10.51	141.60	677.34	∠66.02	1 020.40	1 000.77	19.63	51.976		
5300.00         5277.00         5277.00         5277.00         5277.00         5277.00         5277.00         5277.00         5277.00         5277.00         5370.00         5277.00         5370.00         5277.00         5478.00         5477.00         5473.39         6473.39         1147         11.34         14.30         676.62         286.12         1053.00         1032.05         21.44         49.139           5600.00         5476.48         5473.89         5473.39         11.77         11.35         143.40         676.62         286.12         1053.69         1032.05         21.48         49.139           5600.00         577.40         5677.40         677.21         12.38         11.76         43.75         676.50         286.21         1070.40         10.82.09         12.89         42.20         48.61         48.61         10.82.09         12.23         48.66         48.72.00         48.72.72         48.66         78.72.00         48.72.72         48.66         78.72.00         48.72.72         48.66         78.72.00         48.72.00         48.72.72         48.66         78.72.00         48.72.72         48.66         78.72.00         48.72.72         48.66         78.72.00         48.72.72         48.66         78.72.00	5 200.00	5 178.16	5 178.64	5 178.45	10.86	10.72	141.97	677.14	265.89	1 028.49	1 008.40	20.08	51.207		
5500.00         5476.48         5473.39         5473.39         11.77         11.34         143.04         676.62         288.12         1083.49         1032.05         21.44         49.139           5600.00         5575.92         5574.48         5574.28         12.07         11.55         143.40         676.63         286.29         1082.09         1040.20         21.89         48.511           5700.00         6575.38         5577.40         5677.21         12.38         11.76         143.75         676.50         286.21         1070.48         1048.13         22.35         47.896           5800.00         577.40         580.00         1577.21         12.88         12.29         144.01         676.02         286.81         10.784.71         10.866.62         23.27         46.617           6000.00         5973.88         580.00         5979.79         13.29         14.50.2         677.47         284.10         10.02.13         1077.00         23.71         46.131           6100.00         6172.58         6179.81         817.82         12.81         145.02         677.47         284.10         10.213         1077.00         23.71         46.131           6300.00         6172.58         6179.81															
5800.00         5476.48         5473.99         5473.99         11.77         11.34         143.04         676.62         286.12         1083.49         1082.05         21.44         49.19           5700.00         5575.92         5574.46         5574.28         12.07         11.55         143.40         676.83         286.29         1082.09         21.98         48.511           5700.00         5675.86         5677.40         5677.21         12.38         11.76         143.75         676.50         286.21         1070.48         1048.13         22.35         47.896           5800.00         5774.80         5783.13         5782.93         12.88         11.98         144.41         676.02         286.83         1078.47         105.666         22.81         47276           6000.00         5773.68         5880.00         5879.79         13.29         14.50.2         674.77         284.95         1080.00         107.15         46.131           6100.00         6172.56         6179.81         1678.97         13.39         12.59         14.50.2         674.07         283.98         110.77         1085.76         24.61         45.118           6300.00         6272.09         6773.12         14.14															
5700.00 5 675.36 5 677.40 5 677.21 12.38 11.76 143.75 676.50 286.21 1070.48 1048.13 22.35 47.886 5800.00 6 774.80 5 783.13 5 782.93 12.88 11.88 144.10 676.02 26.86.31 1078.47 1055.66 22.81 47.276 690.00 6 5874.24 5 8870.00 5 888.80 12.98 12.20 144.44 46 675.26 26.86 31 078.47 1055.66 22.81 47.276 690.00 6 5874.24 5 8870.00 5 898.00 5 978.79 13.29 12.39 144.73 674.83 264.23 1083.70 1070.00 23.71 46.131 6100.00 6073.12 6073.00 6072.79 13.59 12.59 145.02 674.75 284.01 1102.13 1077.88 24.15 45.641 45.118 630.00 6073.12 6073.00 6072.79 13.59 12.59 145.02 674.75 284.01 1102.13 1077.88 24.15 45.641 45.118 630.00 6072.00 6272.00 6273.33 6271.12 14.19 13.01 145.68 673.68 263.98 1118.78 1083.74 25.05 44.670 6400.00 6371.44 6.376.53 6.379.32 14.50 13.23 146.02 673.68 263.99 1118.78 1083.74 25.05 44.670 6400.00 6371.44 6.376.53 6.379.32 14.50 13.23 146.02 673.21 263.91 1127.22 1101.71 25.51 44.186 6500.00 670.08 6470.88 6487.67 6487.44 14.80 13.46 144.41 671.18 23.62 111.27.22 1101.71 25.51 44.186 6500.00 670.08 670.88 6487.67 6487.44 14.80 13.46 144.41 671.18 23.62 111.27.22 1101.71 25.51 44.186 6500.00 670.00 6697.03 6570.31 6.579.87 6.579.62 15.10 13.65 144.72 689.79 263.26 1142.06 1115.66 26.41 43.250 6500.00 6698.03 688.03 688.88 15.01 14.06 147.31 668.15 262.87 1185.80 1133.45 22.99 42.455 6900.00 6886.33 688.88 15.01 14.26 147.59 668.16 262.76 1158.80 1133.45 22.99 42.455 6900.00 6886.00 688	5 500.00	5 476.48	5 473.59	5 473.39	11.77	11.34	143.04		266.12	1 053.49	1 032.05	21.44	49.139		
6800.00         6774.80         5783.13         6782.23         12.88         11.98         144.10         676.02         286.83         1078.47         1056.66         22.81         47.276           5000.00         5873.68         5890.00         5979.79         13.29         12.39         144.73         674.83         284.23         1093.70         1070.00         23.71         46.131           6000.00         6073.12         6073.00         6072.79         13.89         12.59         145.02         674.75         284.01         1102.13         1077.98         24.15         45.814           6200.00         6172.56         6179.16         6178.97         13.89         12.81         145.38         674.07         268.98         1110.37         1085.76         24.61         45.118           6300.00         6272.00         6271.33         6271.12         14.90         13.23         146.02         673.21         28.91         1116.76         1093.74         25.55         44.670           6400.00         6370.31         6579.87         6579.62         15.10         13.65         146.72         689.79         263.26         1142.06         1145.03         1113.53         115.05         28.44         42.850	5 600.00	5 575.92	5 574.46	5 574.26	12.07	11.55	143.40	676.63	266.29	1 062.09	1 040.20	21.89	48.511		
6800.00         6774.80         5783.13         6782.23         12.88         11.98         144.10         676.02         286.83         1078.47         1056.66         22.81         47.276           5000.00         5873.68         5890.00         5979.79         13.29         12.39         144.73         674.83         284.23         1093.70         1070.00         23.71         46.131           6000.00         6073.12         6073.00         6072.79         13.89         12.59         145.02         674.75         284.01         1102.13         1077.98         24.15         45.814           6200.00         6172.56         6179.16         6178.97         13.89         12.81         145.38         674.07         268.98         1110.37         1085.76         24.61         45.118           6300.00         6272.00         6271.33         6271.12         14.90         13.23         146.02         673.21         28.91         1116.76         1093.74         25.55         44.670           6400.00         6370.31         6579.87         6579.62         15.10         13.65         146.72         689.79         263.26         1142.06         1145.03         1113.53         115.05         28.44         42.850															
6 900.00         5 874 24         5 887 00         5 886 80         12.88         12.20         1444.44         675 26         264 95         1 085.96         1 085.96         1 085.96         1 085.96         23.27         46.667           6 000.00         5 973.88         5 980.00         5 973.97         13.29         12.39         144.73         674.83         264.23         1 108.70         1070.00         23.71         46.131           6 000.00         6 179.16         6 179.18         6 179.87         13.89         12.81         145.38         674.07         263.98         1 110.37         1085.76         24.61         45.118           6 300.00         6 272.00         6 271.33         6 271.12         14.19         13.01         145.68         673.08         263.96         1 1116.76         1093.74         45.118           6 500.00         6 470.88         6 487.67         6 487.44         14.80         13.46         13.85         146.72         12.22         160.117.17         25.55         44.570           6 400.00         6 570.31         6 579.62         15.10         13.85         146.72         689.79         263.26         114.20         1116.26         24.25         46.87         48.80         42.850<															
600.00 5 673.86 5 980.00 5 7978.79 13.29 12.39 144.73 674.83 264.23 1 993.70 1070.00 23.71 48131 6100.00 6073.12 6073.00 6072.79 13.59 12.59 145.02 674.75 264.01 1102.13 1077.98 24.15 45.641 6200.00 6 712.56 6179.18 6178.97 13.89 12.81 145.38 674.07 263.98 1110.37 1085.76 24.61 45.118 6300.00 6272.00 6271.33 6271.12 14.19 13.01 145.68 673.68 263.96 1118.78 1093.74 25.05 44.670 4600.00 6371.44 6379.53 6379.32 14.50 13.23 146.02 673.21 263.91 1112.72 1101.71 25.51 44.186 6500.00 670.88 64676 6487.44 14.80 13.24 14.60 13.24 14.60 13.24 14.60 13.25 14.60 1															
6 100.00 6 073.12 6 073.00 6 072.79 13.59 12.59 145.02 674.75 264.01 1 102.13 1 077.98 24.15 45.641 6 200.00 6 172.56 6 179.18 6 178.97 13.89 12.81 145.38 673.68 263.96 1 110.37 1 085.76 24.61 45.118 6 300.00 6 272.00 6 271.33 6 271.12 14.19 13.01 145.88 673.68 263.96 1 118.78 1 093.74 25.05 44.670 6 400.00 6 371.44 6 379.53 6 379.32 14.50 13.23 146.02 673.21 263.91 112.722 110.11 12.55 144.196 6 600.00 6 470.88 6 487.67 6 487.44 14.80 13.46 146.41 671.18 263.62 1142.06 115.66 25.97 43.680 6 600.00 6 670.31 6 579.87 6 579.62 15.10 13.65 146.72 669.79 263.26 1142.06 115.66 25.97 43.680 6 600.00 6 670.31 6 579.87 6 579.62 15.10 13.65 146.72 669.79 263.26 1142.06 115.66 26.41 43.250 6 600.00 6 686.75 6 675.02 6 674.76 15.40 13.85 147.01 669.13 263.07 1150.31 1123.46 26.84 42.850 6 600.00 6 686.83 688.93 6 868.68 16.01 14.26 147.31 668.45 262.87 1158.60 1331.31 27.29 42.455 6 800.00 6 808.07 6 961.96 6 661.71 16.31 14.26 147.99 668.16 262.76 1167.24 1139.51 27.73 42.094 7 000.00 6 808.07 6 961.96 6 661.71 16.31 14.45 147.88 660.77 2264.02 1186.82 1157.21 28.61 41.446 7 200.00 7 070.51 7 082.70 7 082.44 16.61 14.67 148.18 667.70 284.02 1186.82 1157.21 28.61 41.446 7 200.00 7 466.95 7 165.67 7 165.41 16.92 14.88 148.47 667.52 264.25 1194.89 1165.83 29.06 41.114 7 300.00 7 7 685.83 7 376.57 7 365.00 17.52 15.30 149.02 666.66 264.02 1122.65 1122.21 122.65 112.21 28.61 41.746 7 200.00 7 7 686.99 7 7 7 7 8 8 7 7 165.43 17.82 15.54 149.39 660.99 266.66 264.02 1212.26 112.23 19.99 40.499 7 500.00 7 7 685.87 7 7 7 8 6 7 7 7 8 7 7															
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6 700.00	6 500.00	6 470.88	6 487.67	6 487.44	14.80	13.46	146.41	671.18	263.62	1 134.53	1 108.56	25.97	43.680		
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6 800.00 6 769.19 6 773.52 6 773.28 15.71 14.06 147.31 668.45 262.87 1158.60 1131.31 27.29 42.455 6 900.00 6 868.63 6 868.93 6 868.68 16.01 14.26 147.59 668.16 262.76 1 167.24 1139.51 27.73 42.094 7000.00 6 968.07 6 961.96 6 961.71 16.31 14.45 147.86 668.07 262.94 1176.28 1148.11 28.16 41.765 7100.00 7 067.51 7 062.70 7 062.44 16.61 14.67 148.18 667.70 264.02 1135.82 1157.21 28.61 41.446 7200.00 7 067.51 7 062.70 7 062.44 17.22 15.11 148.76 667.70 264.02 1135.82 1157.21 28.61 41.446 7 300.00 7 266.39 7 273.69 7 273.44 17.22 15.11 148.76 667.18 264.16 1203.67 1174.14 29.52 40.769 7 400.00 7 365.83 7 365.76 7 365.50 17.52 15.30 149.02 666.66 264.02 1212.66 1182.31 29.96 40.469 7 500.00 7 465.27 7 480.81 7 480.53 17.82 15.54 149.39 664.86 264.38 122.59 1190.16 30.43 40.115 7 600.00 7 564.71 7 565.53 7 565.23 18.13 15.72 149.69 663.01 265.10 1228.97 1190.16 30.43 40.115 7 800.00 7 664.15 7 664.09 7 663.78 18.43 15.92 150.00 661.88 265.87 1237.99 1206.71 31.28 39.577 7 800.00 7 763.59 7 760.79 7 760.47 18.73 16.13 150.29 660.99 266.62 1247.20 1215.48 31.72 39.321 7 900.00 7 863.03 7 859.09 7 858.77 19.03 16.33 150.55 660.69 267.12 1256.60 1224.44 32.16 39.073 8 000.00 7 962.47 7 960.56 7 960.23 19.34 16.55 150.80 660.54 267.41 1265.97 1233.36 32.61 38.824 8 100.00 8 061.96 8 061.15 8 060.82 19.59 16.76 105.95 660.99 267.52 122.71 1230.84 33.57 33.06 38.824 8 100.00 8 259.23 8 259.24 8 259.92 19.94 17.17 63.48 60.19 267.53 126.60 1224.44 33.16 33.37 38.108 8 300.00 8 259.23 8 259.24 8 258.92 19.94 17.17 63.48 60.19 267.63 1264.41 1230.84 33.57 37.665 8 400.00 8 355.49 8 366.21 8 365.88 20.07 17.39 58.55 600.15 267.17 1250.37 1216.68 33.93 37.109 8 800.00 8 448.83 8 488.62 8 468.29 20.18 17.61 59.41 659.77 266.21 1229.18 1195.45 33.31 35.559															
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7 100.00       7 067.51       7 062.70       7 062.44       16.61       14.67       148.18       667.70       264.02       1 185.82       1 157.21       28.61       41.446         7 200.00       7 166.95       7 165.67       7 165.41       16.92       14.88       148.47       667.52       264.25       1 194.89       1 165.83       29.06       41.114         7 300.00       7 266.39       7 273.69       7 273.44       17.22       15.11       148.76       667.18       264.16       1 203.67       1 174.14       29.52       40.769         7 400.00       7 365.83       7 365.76       7 365.50       17.52       15.30       149.02       666.66       264.02       1 212.26       1 182.31       29.96       40.469         7 500.00       7 465.27       7 480.81       7 480.83       17.82       15.54       149.39       664.86       264.38       1 220.59       1 190.16       30.43       40.115         7 600.00       7 564.71       7 565.53       7 565.23       18.13       15.72       149.69       663.01       265.10       1 228.97       1 198.13       30.84       39.850         7 700.00       7 664.15       7 664.09       7 663.78       18.43       15.92															
7 200.00         7 166.95         7 165.67         7 165.41         16.92         14.88         148.47         667.52         264.25         1 194.89         1 165.83         29.06         41.114           7 300.00         7 266.39         7 273.69         7 273.44         17.22         15.11         148.76         667.18         264.16         1 203.67         1 174.14         29.52         40.769           7 400.00         7 365.83         7 365.76         7 365.50         17.52         15.30         149.02         666.66         264.02         1 212.26         1 182.31         29.96         40.469           7 500.00         7 465.27         7 480.81         7 480.53         17.82         15.54         149.39         664.86         264.38         1 220.59         1 190.16         30.43         40.115           7 600.00         7 564.71         7 565.53         7 565.23         18.13         15.72         149.69         663.01         265.10         1 228.97         1 198.13         30.84         39.850           7 700.00         7 664.15         7 664.09         7 663.78         18.43         15.92         150.00         661.88         265.87         1 237.99         1 206.71         31.28         39.577															
7 300.00         7 266.39         7 273.69         7 273.44         17.22         15.11         148.76         667.18         264.16         1 203.67         1 174.14         29.52         40.769           7 400.00         7 365.83         7 365.76         7 365.50         17.52         15.30         149.02         666.66         264.02         1 212.26         1 182.31         29.96         40.469           7 500.00         7 4865.27         7 480.81         7 480.53         17.82         15.54         149.39         664.86         264.38         1 220.59         1 190.16         30.43         40.115           7 600.00         7 564.71         7 565.53         7 565.23         18.13         15.72         149.69         663.01         265.10         1 228.97         1 198.13         30.84         39.850           7 700.00         7 664.15         7 664.09         7 663.78         18.43         15.92         150.00         661.88         265.87         1 237.99         1 206.71         31.28         39.577           7 800.00         7 763.59         7 760.79         7 760.47         18.73         16.13         150.29         660.99         266.62         1 247.20         1 215.48         31.72         39.321	1 100.00	1 001.51	1 002.10	1 002.44	10.01	14.07	140.10	007.70	∠04.0∠	1 100.62	1 157.21	20.01	+1.440		
7 300.00         7 266.39         7 273.69         7 273.44         17.22         15.11         148.76         667.18         264.16         1 203.67         1 174.14         29.52         40.769           7 400.00         7 365.83         7 365.76         7 365.50         17.52         15.30         149.02         666.66         264.02         1 212.26         1 182.31         29.96         40.469           7 500.00         7 4865.27         7 480.81         7 480.53         17.82         15.54         149.39         664.86         264.38         1 220.59         1 190.16         30.43         40.115           7 600.00         7 564.71         7 565.53         7 565.23         18.13         15.72         149.69         663.01         265.10         1 228.97         1 198.13         30.84         39.850           7 700.00         7 664.15         7 664.09         7 663.78         18.43         15.92         150.00         661.88         265.87         1 237.99         1 206.71         31.28         39.577           7 800.00         7 763.59         7 760.79         7 760.47         18.73         16.13         150.29         660.99         266.62         1 247.20         1 215.48         31.72         39.321	7 200.00	7 166.95	7 165.67	7 165.41	16.92	14.88	148.47	667.52	264.25	1 194.89	1 165.83	29.06	41.114		
7 500.00 7 465.27 7 480.81 7 480.53 17.82 15.54 149.39 664.86 264.38 1 220.59 1 190.16 30.43 40.115 7 600.00 7 564.71 7 565.53 7 565.23 18.13 15.72 149.69 663.01 265.10 1 228.97 1 198.13 30.84 39.850 7 700.00 7 664.15 7 664.09 7 663.78 18.43 15.92 150.00 661.88 265.87 1 237.99 1 206.71 31.28 39.577 7 800.00 7 763.59 7 760.79 7 760.47 18.73 16.13 150.29 660.99 266.62 1 247.20 1 215.48 31.72 39.321 7 900.00 7 863.03 7 859.09 7 858.77 19.03 16.33 150.55 660.69 267.12 1 256.60 1 224.44 32.16 39.073 8 000.00 7 962.47 7 960.56 7 960.23 19.34 16.55 150.80 660.54 267.41 1 265.97 1 233.36 32.61 38.824 8 100.00 8 061.96 8 061.15 8 060.82 19.59 16.76 105.95 660.36 267.56 1 272.27 1 239.21 33.06 38.483 8 200.00 8 161.14 8 160.08 8 159.75 19.79 16.96 75.63 660.29 267.57 1 271.68 1 238.31 33.37 38.108 8 300.00 8 259.23 8 259.24 8 258.92 19.94 17.17 63.48 660.19 267.63 1 264.41 1 230.84 33.57 37.665 8 400.00 8 355.49 8 366.21 8 365.88 20.07 17.39 5 8.55 660.15 267.17 1 250.37 1 216.68 33.69 37.109 8 500.00 8 448.83 8 468.62 8 468.29 20.18 17.61 59.41 658.97 266.21 1 229.18 1 195.45 33.73 36.438 8 600.00 8 536.52 8 554.03 8 553.68 20.29 17.79 63.18 657.46 265.59 1 202.09 1 168.28 33.81 35.559										1 203.67					
7 600.00       7 564.71       7 565.53       7 565.23       18.13       15.72       149.69       663.01       265.10       1 228.97       1 198.13       30.84       39.850         7 700.00       7 664.15       7 664.09       7 663.78       18.43       15.92       150.00       661.88       265.87       1 237.99       1 206.71       31.28       39.577         7 800.00       7 763.59       7 760.79       7 760.47       18.73       16.13       150.29       660.99       266.62       1 247.20       1 215.48       31.72       39.321         7 900.00       7 863.03       7 859.09       7 858.77       19.03       16.33       150.55       660.69       267.12       1 256.60       1 224.44       32.16       39.073         8 000.00       7 962.47       7 960.56       7 960.23       19.34       16.55       150.80       660.54       267.41       1 265.97       1 233.36       32.61       38.824         8 100.00       8 061.96       8 061.15       8 060.82       19.59       16.76       105.95       660.36       267.56       1 272.27       1 239.21       33.06       38.483         8 200.00       8 161.14       8 160.88       8 159.75       19.79       16.96	7 400.00	7 365.83	7 365.76	7 365.50	17.52	15.30	149.02	666.66	264.02	1 212.26	1 182.31	29.96	40.469		
7700.00 7 664.15 7 664.09 7 663.78 18.43 15.92 150.00 661.88 265.87 1 237.99 1 206.71 31.28 39.577 7800.00 7 763.59 7 760.79 7 760.47 18.73 16.13 150.29 660.99 266.62 1 247.20 1 215.48 31.72 39.321 7900.00 7 863.03 7 859.09 7 858.77 19.03 16.33 150.55 660.69 267.12 1 256.60 1 224.44 32.16 39.073 8000.00 7 962.47 7 960.56 7 960.23 19.34 16.55 150.80 660.54 267.41 1 265.97 1 233.36 32.61 38.824 8100.00 8 061.96 8 061.15 8 060.82 19.59 16.76 105.95 660.36 267.56 1 272.27 1 239.21 33.06 38.483 8200.00 8 161.14 8 160.08 8 159.75 19.79 16.96 75.63 660.29 267.57 1 271.68 1 238.31 33.37 38.108 8300.00 8 259.23 8 259.24 8 258.92 19.94 17.17 63.48 660.19 267.63 1 264.41 1 230.84 33.57 37.665 8400.00 8 355.49 8 366.21 8 365.88 20.07 17.39 58.55 660.15 267.17 1 250.37 1 216.68 33.69 37.109 8 500.00 8 448.83 8 468.62 8 468.29 20.18 17.61 59.41 658.97 266.21 1 229.18 1 195.45 33.73 36.438 8 600.00 8 536.52 8 554.03 8 553.68 20.29 17.79 63.18 657.46 265.59 1 202.09 1 168.28 33.81 35.559	7 500.00	7 465.27	7 480.81	7 480.53	17.82	15.54	149.39	664.86	264.38			30.43	40.115		
7 800.00       7 763.59       7 760.79       7 760.47       18.73       16.13       150.29       660.99       266.62       1 247.20       1 215.48       31.72       39.321         7 900.00       7 863.03       7 859.09       7 858.77       19.03       16.33       150.55       660.69       267.12       1 256.60       1 224.44       32.16       39.073         8 000.00       7 962.47       7 960.56       7 960.23       19.34       16.55       150.80       660.54       267.41       1 265.97       1 233.36       32.61       38.824         8 100.00       8 061.96       8 061.15       8 060.82       19.59       16.76       105.95       660.36       267.56       1 272.27       1 239.21       33.06       38.483         8 200.00       8 161.14       8 160.08       8 159.75       19.79       16.96       75.63       660.29       267.57       1 271.68       1 238.31       33.37       38.108         8 300.00       8 259.23       8 259.24       8 258.92       19.94       17.17       63.48       660.19       267.63       1 264.41       1 230.84       33.57       37.665         8 400.00       8 355.49       8 366.21       8 365.88       20.07       17.39	7 600.00	7 564.71	7 565.53	7 565.23	18.13	15.72	149.69	663.01	265.10	1 228.97	1 198.13	30.84	39.850		
7 800.00       7 763.59       7 760.79       7 760.47       18.73       16.13       150.29       660.99       266.62       1 247.20       1 215.48       31.72       39.321         7 900.00       7 863.03       7 859.09       7 858.77       19.03       16.33       150.55       660.69       267.12       1 256.60       1 224.44       32.16       39.073         8 000.00       7 962.47       7 960.56       7 960.23       19.34       16.55       150.80       660.54       267.41       1 265.97       1 233.36       32.61       38.824         8 100.00       8 061.96       8 061.15       8 060.82       19.59       16.76       105.95       660.36       267.56       1 272.27       1 239.21       33.06       38.483         8 200.00       8 161.14       8 160.08       8 159.75       19.79       16.96       75.63       660.29       267.57       1 271.68       1 238.31       33.37       38.108         8 300.00       8 259.23       8 259.24       8 258.92       19.94       17.17       63.48       660.19       267.63       1 264.41       1 230.84       33.57       37.665         8 400.00       8 355.49       8 366.21       8 365.88       20.07       17.39	7 700 00	7 604 45	7 604 00	7 660 70	40.40	45.00	150.00	004.00	205.07	4 007 00	4 000 74	04.00	20 577		
7 900.00       7 863.03       7 859.09       7 858.77       19.03       16.33       150.55       660.69       267.12       1 256.60       1 224.44       32.16       39.073         8 000.00       7 962.47       7 960.56       7 960.23       19.34       16.55       150.80       660.54       267.41       1 265.97       1 233.36       32.61       38.824         8 100.00       8 061.96       8 061.15       8 060.82       19.59       16.76       105.95       660.36       267.56       1 272.27       1 239.21       33.06       38.483         8 200.00       8 161.14       8 160.08       8 159.75       19.79       16.96       75.63       660.29       267.57       1 271.68       1 238.31       33.37       38.108         8 300.00       8 259.23       8 259.24       8 258.92       19.94       17.17       63.48       660.19       267.63       1 264.41       1 230.84       33.57       37.665         8 400.00       8 355.49       8 366.21       8 365.88       20.07       17.39       58.55       660.15       267.17       1 250.37       1 216.68       33.69       37.109         8 500.00       8 448.83       8 468.62       8 468.29       20.18       17.61															
8 000.00       7 962.47       7 960.56       7 960.23       19.34       16.55       150.80       660.54       267.41       1 265.97       1 233.36       32.61       38.824         8 100.00       8 061.96       8 061.15       8 060.82       19.59       16.76       105.95       660.36       267.56       1 272.27       1 239.21       33.06       38.483         8 200.00       8 161.14       8 160.08       8 159.75       19.79       16.96       75.63       660.29       267.57       1 271.68       1 238.31       33.37       38.108         8 300.00       8 259.23       8 259.24       8 258.92       19.94       17.17       63.48       660.19       267.63       1 264.41       1 230.84       33.57       37.665         8 400.00       8 355.49       8 366.21       8 365.88       20.07       17.39       58.55       660.15       267.17       1 250.37       1 216.68       33.69       37.109         8 500.00       8 448.83       8 468.62       8 468.29       20.18       17.61       59.41       658.97       266.21       1 229.18       1 195.45       33.73       36.438         8 600.00       8 536.52       8 554.03       8 553.68       20.29       17.79       <															
8 100.00       8 061.96       8 061.91       8 060.82       19.59       16.76       105.95       660.36       267.56       1 272.27       1 239.21       33.06       38.483         8 200.00       8 161.14       8 160.08       8 159.75       19.79       16.96       75.63       660.29       267.57       1 271.68       1 238.31       33.37       38.108         8 300.00       8 259.23       8 259.24       8 258.92       19.94       17.17       63.48       660.19       267.63       1 264.41       1 230.84       33.57       37.665         8 400.00       8 355.49       8 366.21       8 365.88       20.07       17.39       58.55       660.15       267.17       1 250.37       1 216.68       33.69       37.109         8 500.00       8 448.83       8 468.62       8 468.29       20.18       17.61       59.41       658.97       266.21       1 229.18       1 195.45       33.73       36.438         8 600.00       8 536.52       8 554.03       8 553.68       20.29       17.79       63.18       657.46       265.59       1 202.09       1 168.28       33.81       35.559															
8 200.00 8 161.14 8 160.08 8 159.75 19.79 16.96 75.63 660.29 267.57 1 271.68 1 238.31 33.37 38.108 8 300.00 8 259.23 8 259.24 8 258.92 19.94 17.17 63.48 660.19 267.63 1 264.41 1 230.84 33.57 37.665 8 400.00 8 355.49 8 366.21 8 365.88 20.07 17.39 58.55 660.15 267.17 1 250.37 1 216.68 33.69 37.109 8 500.00 8 448.83 8 468.62 8 468.29 20.18 17.61 59.41 658.97 266.21 1 229.18 1 195.45 33.73 36.438 600.00 8 536.52 8 554.03 8 553.68 20.29 17.79 63.18 657.46 265.59 1 202.09 1 168.28 33.81 35.559															
8 300.00       8 259.23       8 259.24       8 258.92       19.94       17.17       63.48       660.19       267.63       1 264.41       1 230.84       33.57       37.665         8 400.00       8 355.49       8 366.21       8 365.88       20.07       17.39       58.55       660.15       267.17       1 250.37       1 216.68       33.69       37.109         8 500.00       8 448.83       8 468.62       8 468.29       20.18       17.61       59.41       658.97       266.21       1 229.18       1 195.45       33.73       36.438         8 600.00       8 536.52       8 554.03       8 553.68       20.29       17.79       63.18       657.46       265.59       1 202.09       1 168.28       33.81       35.559	5 .00.00	3 301.00	5 501.10	0 000.02	10.00	.0.70	.50.50	000.00	207.00	. 212.21	. 200.21	55.56	50.400		
8 300.00       8 259.23       8 259.24       8 258.92       19.94       17.17       63.48       660.19       267.63       1 264.41       1 230.84       33.57       37.665         8 400.00       8 355.49       8 366.21       8 365.88       20.07       17.39       58.55       660.15       267.17       1 250.37       1 216.68       33.69       37.109         8 500.00       8 448.83       8 468.62       8 468.29       20.18       17.61       59.41       658.97       266.21       1 229.18       1 195.45       33.73       36.438         8 600.00       8 536.52       8 554.03       8 553.68       20.29       17.79       63.18       657.46       265.59       1 202.09       1 168.28       33.81       35.559	8 200.00	8 161.14	8 160.08	8 159.75	19.79	16.96	75.63	660.29	267.57	1 271.68	1 238.31	33.37	38.108		
8 500.00 8 448.83 8 468.62 8 468.29 20.18 17.61 59.41 658.97 266.21 1 229.18 1 195.45 33.73 36.438 8 600.00 8 536.52 8 554.03 8 553.68 20.29 17.79 63.18 657.46 265.59 1 202.09 1 168.28 33.81 35.559															
8 600.00 8 536.52 8 554.03 8 553.68 20.29 17.79 63.18 657.46 265.59 1 202.09 1 168.28 33.81 35.559	8 400.00	8 355.49	8 366.21	8 365.88	20.07	17.39	58.55	660.15	267.17	1 250.37	1 216.68	33.69	37.109		
	8 500.00	8 448.83	8 468.62	8 468.29	20.18	17.61	59.41	658.97	266.21	1 229.18	1 195.45	33.73	36.438		
8 700.00 8 616.68 8 641.76 8 641.38 20.42 17.97 68.08 655.50 264.82 1 170.56 1 136.45 34.11 34.320	8 600.00	8 536.52	8 554.03	8 553.68	20.29	17.79	63.18	657.46	265.59	1 202.09	1 168.28	33.81	35.559		
0 1/01.00 0 010.00 0 041.70 0 041.30 20.42 17.97 08.08 050.50 264.82 1 17/0.50 1 136.45 34.11 34.320	0.700.00	0.640.00	0.644.70	0.644.00	00.40	17.07	60.00	055.50	004.00	4 470 50	1 100 15	04.44	04.000		
	8 /00.00	8 616.68	8 641.76	8 641.38	20.42	17.97	68.08	655.50	264.82	1 170.56	1 136.45	34.11	34.320		



Project:

#### Weatherford International Ltd.

Anticollision Report



Weatherford

Company: NEWFIELD EXPLORATION CO.

UTE TRIBAL 13 and 14-9-4-3-2WH PAD Reference Site:

DUCHESNE COUNTY, UT

Site Error: 0.00 ft

Reference Well: UTE TRIBAL 13-9-4-3-2WH

Well Error: 0.00 ft

UTE TRIBAL 13-9-4-3-2WH Reference Wellbore

Reference Design: Design #2 Local Co-ordinate Reference:

Well UTE TRIBAL 13-9-4-3-2WH TVD Reference: WELL @ 5284.00ft (Pioneer 78) WELL @ 5284.00ft (Pioneer 78) MD Reference:

True North Reference:

**Survey Calculation Method:** Minimum Curvature

Output errors are at 2.00 sigma

EDM 5000.1 Single User Db Database:

Offset TVD Reference: Offset Datum

Offset Des	·		NG 14-9-3	-2W - EXIS	TING 14	-9-3-2W - E	XISTING 14-9-	3-2W - EXI	STING 14-	9-3-2W			Offset Site Error:	0.00 f
Survey Progr		-MWD Offse	.4	Cami Maian	Auta				Di-t-				Offset Well Error:	0.00 f
Refere Measured	ence Vertical		Vertical	Semi Major	Offset	Himbaida	Offset Wellbor	- Cambra	Dista	nce Between	Minimum	S		
Depth (ft)	Depth (ft)	Measured Depth (ft)	Depth (ft)	Reference (ft)	(ft)	Highside Toolface (°)	+N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Ellipses (ft)	Separation (ft)	Separation Factor	Warning	
8 800.00	8 687.76	8 713.71	8 713.30	20.58	18.13	73.36	653.57	263.97	1 136.66	1 102.01	34.65	32.803		
8 900.00	8 748.37	8 773.70	8 773.26	20.81	18.25	78.68	651.82	263.20	1 103.07	1 067.66	35.40	31.156		
9 000.00	8 797.34	8 820.76	8 820.29	21.15	18.35	83.49	650.29	262.60	1 072.43	1 036.15	36.28	29.557		
9 100.00	8 833.71	8 854.10	8 853.60	21.65	18.42	87.30	649.15	262.17	1 047.33	1 010.09	37.24	28.125		
9 200.00	8 856.78	8 873.84	8 873.33	22.33	18.47	89.80	648.47	261.92	1 029.97	991.69	38.28	26.909		
9 300.00	8 866.43	8 880.08	8 879.57	23.20	18.48	90.72	648.26	261.85	1 021.86	982.47	39.39	25.939		
9 332.95	8 868.21	8 880.74	8 880.23	23.52	18.48	90.76	648.23	261.84	1 021.33	981.54	39.79	25.667		
9 400.00	8 871.83	8 882.08	8 881.57	24.22	18.48	90.83	648.19	261.82	1 023.53	982.93	40.60	25.210		
9 500.00	8 877.24	8 884.07	8 883.56	25.37	18.49	90.95	648.12	261.79	1 034.90	992.99	41.90	24.698		
9 600.00	8 882.65	8 886.07	8 885.55	26.62	18.49	91.06	648.05	261.77	1 055.65	1 012.37	43.29	24.388		
9 700.00	8 888.06	8 888.06	8 887.55	27.96	18.50	91.17	647.98	261.74	1 085.26	1 040.52	44.74	24.257 SF		
9 800.00	8 893.46	8 890.05	8 889.54	29.38	18.50	91.28	647.91	261.72	1 123.01	1 076.76	46.25	24.281		
9 900.00	8 898.87	8 892.05	8 891.53	30.85	18.51	91.39	647.84	261.69	1 168.13	1 120.32	47.81	24.432		
10 000.00	8 904.28	8 894.04	8 893.53	32.36	18.51	91.51	647.78	261.67	1 219.79	1 170.38	49.41	24.686		
10 100.00	8 909.69	8 896.04	8 895.52	33.93	18.51	91.62	647.71	261.64	1 277.20	1 226.15	51.05	25.018		
10 200.00	8 915.10	8 898.03	8 897.51	35.53	18.52	91.73	647.64	261.62	1 339.62	1 286.90	52.72	25.411		
10 300.00	8 920.50	8 900.03	8 899.51	37.16	18.52	91.84	647.57	261.59	1 406.39	1 351.98	54.41	25.847		
10 400.00	8 925.91	8 902.03	8 901.50	38.81	18.53	91.95	647.50	261.57	1 476.91	1 420.78	56.13	26.313		
10 500.00	8 931.32	8 904.02	8 903.50	40.50	18.53	92.07	647.43	261.54	1 550.67	1 492.81	57.86	26.799		
10 600.00	8 936.73	8 906.02	8 905.49	42.20	18.53	92.18	647.36	261.52	1 627.23	1 567.62	59.62	27.295		
10 700.00	8 942.14	8 908.01	8 907.48	43.92	18.54	92.29	647.30	261.49	1 706.22	1 644.84	61.38	27.796		
10 800.00	8 947.54	8 910.01	8 909.48	45.66	18.54	92.40	647.23	261.47	1 787.31	1 724.15	63.16	28.297		
10 900.00	8 952.95	8 912.00	8 911.47	47.41	18.55	92.51	647.16	261.44	1 870.24	1 805.28	64.95	28.793		
11 000.00	8 958.36	8 914.00	8 913.47	49.17	18.55	92.62	647.09	261.41	1 954.75	1 888.00	66.76	29.282		
11 100.00	8 963.77	8 916.00	8 915.46	50.95	18.56	92.74	647.02	261.39	2 040.67	1 972.10	68.57	29.762		
11 200.00	8 969.18	8 917.99	8 917.46	52.74	18.56	92.85	646.95	261.36	2 127.82	2 057.43	70.39	30.231		



#### Weatherford International Ltd.

Anticollision Report



Weatherford

Company: NEWFIELD EXPLORATION CO. Project: DUCHESNE COUNTY, UT

UTE TRIBAL 13 and 14-9-4-3-2WH PAD Reference Site:

Site Error: 0.00 ft

Reference Well: UTE TRIBAL 13-9-4-3-2WH

Well Error: 0.00 ft

UTE TRIBAL 13-9-4-3-2WH Reference Wellbore

Reference Design: Design #2 Local Co-ordinate Reference:

Well UTE TRIBAL 13-9-4-3-2WH TVD Reference: WELL @ 5284.00ft (Pioneer 78) WELL @ 5284.00ft (Pioneer 78) MD Reference:

True North Reference:

**Survey Calculation Method:** Minimum Curvature

Output errors are at 2.00 sigma

EDM 5000.1 Single User Db Database:

Offset TVD Reference: Offset Datum

Survey Prog	e <b>sign</b> gram: 156	9-MWD	RIBAL 13 a										Offset Well Error:	0.00
Refe	rence	Offs		Semi Major					Dista					
leasured Depth	Vertical Depth	Measured Depth	Vertical Depth	Reference	Offset	Highside Toolface	Offset Wellbor	e Centre +E/-W	Between Centres	Between Ellipses	Minimum Separation	Separation Factor	Warning	
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(°)	(ft)	(ft)	(ft)	(ft)	(ft)			
1 574.00	1 572.00	1 569.00	1 568.43	0.00	0.00	168.30	22.77	50.12	115.53					
1 600.00		1 592.24	1 591.63	0.17	0.10	168.34	23.41	51.20	118.59	118.34	0.25	474.627		
1 700.00		1 691.52	1 690.77	0.31	0.28	168.52	26.16	55.82	130.50	129.86	0.64	202.939		
1 800.00	1 797.23	1 789.02	1 788.06	0.58	0.51	170.76	26.21	61.86	145.92	144.81	1.11	131.462		
1 900.00		1 887.47	1 886.24	0.88	0.75	172.71	24.61	68.93	162.68	161.15	1.53	106.214		
2 000.00	1 996.11	1 985.92	1 984.42	1.19	1.00	174.29	23.01	75.99	179.59	177.62	1.97	91.122		
2 100.00	2 095.54	2 084.37	2 082.61	1.49	1.26	175.60	21.41	83.05	196.61	194.19	2.42	81.227		
2 200.00	2 194.98	2 182.82	2 180.79	1.79	1.52	176.70	19.81	90.11	213.71	210.83	2.87	74.338		
2 300.00	2 294.42	2 281.27	2 278.97	2.09	1.78	177.63	18.21	97.17	230.88	227.54	3.33	69.288		
2 400.00	2 393.86	2 379.72	2 377.16	2.39	2.04	178.44	16.60	104.24	248.10	244.30	3.79	65.436		
2 500.00	2 493.30	2 478.17	2 475.34	2.70	2.30	179.14	15.00	111.30	265.36	261.11	4.25	62.406		
2 600.00	2 592.74	2 576.62	2 573.52	3.00	2.55	179.76	13.40	118.36	282.65	277.94	4.71	59.963		
2 700.00		2 675.07	2 671.71	3.30	2.81	-179.69	11.80	125.42	299.98	294.80	5.18	57.952		
2 800.00		2 773.52	2 769.89	3.60	3.07	-179.21	10.20	132.49	317.32	311.68	5.64	56.272		
2 900.00		2 871.97	2 868.07	3.91	3.33	-178.77	8.59	139.55	334.69	328.59	6.10	54.835		
3 000.00		2 970.42	2 966.26	4.21	3.59	-178.38	6.99	146.61	352.07	345.51	6.57	53.613		
3 100.00	3 089.94	3 068.87	3 064.44	4.51	3.85	-178.02	5.39	153.67	369.47	362.44	7.03	52.547		
3 200.00		3 167.32	3 162.63	4.81	4.11	-176.02	3.79	160.73	386.88	379.39	7.50	51.613		
3 300.00		3 265.77	3 260.81	5.12	4.11	-177.70	2.19	167.80	404.31	396.35	7.96	50.788		
3 400.00		3 364.22	3 358.99	5.42	4.63	-177.13	0.59	174.86	421.74	413.31	8.43	50.054		
3 500.00		3 462.67	3 457.18	5.72	4.89	-176.88	-1.02	181.92	439.18	430.29	8.89	49.396		
3 600.00	3 587.13	3 561.12	3 555.36	6.02	5.15	-176.65	-2.62	188.98	456.63	447.27	9.36	48.804		
3 700.00		3 659.57	3 653.54	6.33	5.41	-176.44	-4.22	196.05	474.08	464.26	9.82	48.267		
3 800.00		3 758.02	3 751.73	6.63	5.67	-176.24	-5.82	203.11	491.54	481.25	10.29	47.779		
3 900.00		3 856.47	3 849.91	6.93	5.93	-176.05	-7.42	210.17	509.00	498.25	10.75	47.334		
4 000.00	3 984.89	3 954.92	3 948.09	7.23	6.19	-175.88	-9.03	217.23	526.48	515.26	11.22	46.925		
4 100.00	4 084.33	4 053.37	4 046.28	7.54	6.45	-175.72	-10.63	224.29	543.95	532.26	11.69	46.549		
4 200.00		4 151.82	4 144.46	7.84	6.71	-175.57	-12.23	231.36	561.43	549.28	12.15	46.201		
4 300.00	4 283.21	4 250.27	4 242.64	8.14	6.97	-175.42	-13.83	238.42	578.91	566.29	12.62	45.879		
4 400.00	4 382.65	4 348.72	4 340.83	8.44	7.23	-175.29	-15.43	245.48	596.40	583.31	13.08	45.580		
4 500.00	4 482.09	4 447.17	4 439.01	8.75	7.49	-175.16	-17.04	252.54	613.88	600.33	13.55	45.302		
4 600.00	4 581.53	4 545.62	4 537.19	9.05	7.75	-175.04	-18.64	259.60	631.38	617.36	14.02	45.042		
4 700.00		4 644.07	4 635.38	9.05	8.01	-174.93	-20.24	266.67	648.87	634.38	14.48	44.798		
4 800.00		4 742.52	4 733.56	9.65	8.27	-174.82	-21.84	273.73	666.37	651.41	14.95	44.570		
4 900.00		4 840.97	4 831.74	9.96	8.53	-174.72	-23.44	280.79	683.86	668.45	15.42	44.355		
5 000.00		4 939.42	4 929.93	10.26	8.79	-174.63	-25.04	287.85	701.36	685.48	15.88	44.153		
5 100.00		5 037.87	5 028.11	10.56	9.05	-174.53	-26.65	294.92	718.87	702.51	16.35	43.963		
5 200.00		5 136.32	5 126.29	10.86	9.30	-174.45	-28.25	301.98	736.37	719.55	16.82	43.783		
5 300.00		5 234.77	5 224.48	11.17	9.56	-174.36	-29.85	309.04	753.87	736.59	17.29	43.612		
5 400.00		5 333.22	5 322.66	11.47	9.82	-174.28 -174.21	-31.45 -33.05	316.10 323.16	771.38	753.63 770.67	17.75	43.451		
5 500.00	5 476.48	5 431.67	5 420.84	11.77	10.08	-174.21	-33.05	323.16	788.89	770.67	18.22	43.297		
5 600.00	5 575.92	5 530.12	5 519.03	12.07	10.34	-174.13	-34.66	330.23	806.40	787.71	18.69	43.152		
5 700.00	5 675.36	5 628.57	5 617.21	12.38	10.60	-174.07	-36.26	337.29	823.91	804.75	19.15	43.013		
5 800.00	5 774.80	5 727.02	5 715.39	12.68	10.86	-174.00	-37.86	344.35	841.42	821.80	19.62	42.881		
5 900.00	5 874.24	5 825.47	5 813.58	12.98	11.12	-173.93	-39.46	351.41	858.93	838.84	20.09	42.755		
6 000.00	5 973.68	5 923.92	5 911.76	13.29	11.38	-173.87	-41.06	358.48	876.45	855.89	20.56	42.634		
6 100 00	6 073.12	6 022.37	6 000 04	12 50	11 64	_172 01	-42.67	365.54	893.96	872.94	21.02	42.519		
6 100.00 6 200.00		6 120.82	6 009.94 6 108.13	13.59 13.89	11.64 11.90	-173.81 -173.76	-42.67 -44.27	365.54 372.60	911.48	872.94 889.98	21.02	42.519		
6 300.00		6 219.27	6 206.31	14.19	12.16	-173.76	-44.27 -45.87	372.60	928.99	907.03	21.49	42.409		
6 400.00		6 317.72	6 304.50	14.19	12.10	-173.70	-45.67 -47.47	386.72	946.51	924.08	22.43	42.303		
6 500.00		6 416.17	6 402.68	14.80	12.42	-173.60	-47.47	393.79	964.03	941.13	22.43	42.202		
2 200.00	- 7.0.00		32.00		.2.00	0.00	.0.07	200.70	30 1.30	20		.200		
6 600.00	6 570.31	6 514.62	6 500.86	15.10	12.94	-173.55	-50.67	400.85	981.55	958.18	23.36	42.011		



Company:

#### Weatherford International Ltd.

### Anticollision Report



Weatherford

NEWFIELD EXPLORATION CO.

Project: DUCHESNE COUNTY, UT

UTE TRIBAL 13 and 14-9-4-3-2WH PAD Reference Site:

0.00 ft Site Error:

Reference Well: UTE TRIBAL 13-9-4-3-2WH

Well Error: 0.00 ft

UTE TRIBAL 13-9-4-3-2WH Reference Wellbore

Reference Design: Design #2 Local Co-ordinate Reference:

Well UTE TRIBAL 13-9-4-3-2WH TVD Reference: WELL @ 5284.00ft (Pioneer 78) WELL @ 5284.00ft (Pioneer 78) MD Reference:

North Reference: True

**Survey Calculation Method:** Minimum Curvature

Output errors are at 2.00 sigma

EDM 5000.1 Single User Db Database:

Offset TVD Reference: Offset Datum

Offset Design								Offset Site Error:	0.00 ft					
Survey Progr		9-MWD	-4	Comi Maion	Auda				B!-4-				Offset Well Error:	0.00 ft
Refere Measured	ence Vertical	Offse Measured	et Vertical	Semi Major Reference	Offset	Highside	Offset Wellbore	Centre	Dista Between	Between	Minimum	Separation	Warning	
Depth (ft)	Depth (ft)	Depth (ft)	Depth (ft)	(ft)	(ft)	Toolface (°)	+N/-S (ft)	+E/-W (ft)	Centres (ft)	Ellipses (ft)	Separation (ft)	Factor	waining	
6 700.00	6 669.75	6 613.07	6 599.05	15.40	13.20	-173.50	-52.28	407.91	999.07	975.24	23.83	41.921		
6 800.00	6 769.19	6 711.52	6 697.23	15.71	13.46	-173.46	-53.88	414.97	1 016.59	992.29	24.30	41.835		
6 900.00	6 868.63	6 809.97	6 795.41	16.01	13.72	-173.41	-55.48	422.04	1 034.11	1 009.34	24.77	41.752		
7 000.00	6 968.07	6 908.42	6 893.60	16.31	13.98	-173.37	-57.08	429.10	1 051.63	1 026.39	25.24	41.671		
7 100.00	7 067.51	7 006.87	6 991.78	16.61	14.24	-173.33	-58.68	436.16	1 069.15	1 043.45	25.70	41.594		
7 200.00	7 166.95	7 105.32	7 089.96	16.92	14.50	-173.29	-60.29	443.22	1 086.67	1 060.50	26.17	41.519		
7 300.00	7 266.39	7 203.77	7 188.15	17.22	14.76	-173.25	-61.89	450.28	1 104.20	1 077.55	26.64	41.447		
7 400.00	7 365.83	7 302.22	7 286.33	17.52	15.02	-173.21	-63.49	457.35	1 121.72	1 094.61	27.11	41.377		
7 500.00	7 465.27	7 400.67	7 384.51	17.82	15.28	-173.18	-65.09	464.41	1 139.24	1 111.66	27.58	41.310		
7 600.00	7 564.71 7 664.15	7 499.12	7 482.70	18.13	15.54	-173.14	-66.69	471.47	1 156.77	1 128.72	28.05	41.244		
7 700.00	7 004.15	7 597.57	7 580.88	18.43	15.80	-173.11	-68.29	478.53	1 174.29	1 145.78	28.52	41.181		
7 800.00	7 763.59	7 696.02	7 679.06	18.73	16.06	-173.07	-69.90	485.59	1 191.82	1 162.83	28.98	41.120		
7 900.00	7 863.03	7 794.47	7 777.25	19.03	16.32	-173.04	-71.50	492.66	1 209.34	1 179.89	29.45	41.061		
8 000.00	7 962.47	7 892.92	7 875.43	19.34	16.58	-173.01	-73.10	499.72	1 226.87	1 196.95	29.92	41.003		
8 100.00 8 200.00	8 061.96 8 161.14	7 991.44 8 104.51	7 973.68 8 086.47	19.59 19.79	16.84 17.11	141.42 110.43	-74.70 -74.16	506.79 514.38	1 243.32 1 256.91	1 212.92 1 226.07	30.39 30.83	40.907 40.766		
0 200.00	0 101.14	0 104.01	0 000.47	10.70	.,	110.40	74.10	014.00	1 200.01	1 220.01	00.00	40.700		
8 300.00	8 259.23	8 228.88	8 210.02	19.94	17.32	97.31	-61.68	520.10	1 266.19	1 234.98	31.21	40.569		
8 400.00	8 355.49	8 355.14	8 333.47	20.07	17.50	90.92	-35.70	522.86	1 270.87	1 239.31	31.56	40.264		
8 500.00	8 448.83	8 470.80	8 443.43	20.18	17.65	89.34	-0.03	522.80	1 271.44	1 239.53	31.91	39.845		
8 600.00 8 700.00	8 536.52 8 616.68	8 569.03 8 667.95	8 531.85 8 614.17	20.29 20.42	17.76 17.88	89.57 89.81	42.57 97.28	522.08 521.16	1 271.39 1 271.35	1 239.10 1 238.57	32.28 32.77	39.381 38.792		
8 700.00	0 0 10.00	0 007.93	0 0 14.17	20.42	17.00	09.01	97.20	521.10	1 27 1.33	1 230.57	32.11	30.792		
8 800.00	8 687.76	8 767.60	8 688.68	20.58	18.03	90.05	163.33	520.05	1 271.33	1 237.88	33.45	38.009		
8 832.47	8 708.65	8 800.12	8 710.92	20.64	18.09	90.13	187.04	519.65	1 271.33	1 237.60	33.73	37.691		
8 900.00	8 748.37	8 868.02	8 753.76	20.81	18.26	90.30	239.68	518.76	1 271.33	1 236.96	34.38	36.984		
9 000.00 9 100.00	8 797.34 8 833.71	8 969.20 9 071.14	8 807.90 8 849.74	21.15 21.65	18.64 19.25	90.54 90.77	325.04 417.90	517.33 515.76	1 271.36 1 271.40	1 235.75 1 234.23	35.61 37.17	35.706 34.207		
9 100.00	0 033.71	9 07 1.14	0 049.74	21.05	19.23	90.77	417.90	515.70	12/1.40	1 234.23	37.17	34.207		
9 200.00	8 856.78	9 173.82	8 878.13	22.33	20.10	90.98	516.47	514.10	1 271.46	1 232.40	39.05	32.556		
9 300.00	8 866.43	9 277.21	8 892.19	23.20	21.14	91.16	618.79	512.38	1 271.52	1 230.29	41.22	30.843		
9 400.00	8 871.83	9 377.47	8 897.65	24.22	22.28	91.16	718.89	510.69	1 271.50	1 227.90	43.60	29.161		
9 500.00 9 600.00	8 877.24 8 882.65	9 477.47 9 577.47	8 903.06 8 908.47	25.37 26.62	23.53 24.86	91.16 91.16	818.73 918.57	509.01 507.33	1 271.48 1 271.47	1 225.32 1 222.56	46.17 48.90	27.540 25.999		
3 000.00	0 002.03	9 311.41	0 300.47	20.02	24.00	31.10	910.07	307.33	12/1.4/	1 222.50	40.90	25.555		
9 700.00	8 888.06	9 677.47	8 913.87	27.96	26.26	91.16	1 018.41	505.65	1 271.45	1 219.67	51.78	24.554		
9 800.00	8 893.46	9 777.47	8 919.28	29.38	27.73	91.16	1 118.25	503.96	1 271.43	1 216.65	54.78	23.210		
9 900.00	8 898.87	9 877.47	8 924.69	30.85	29.24	91.16	1 218.09	502.28	1 271.42	1 213.54	57.88	21.967		
10 000.00 10 100.00	8 904.28 8 909.69	9 977.47 10 077.47	8 930.10 8 935.50	32.36 33.93	30.81 32.41	91.16 91.16	1 317.93 1 417.77	500.60 498.92	1 271.40 1 271.38	1 210.34 1 207.06	61.06 64.32	20.821 19.766		
10 100.00	0 000.00	10 011.41	0 000.00	00.00	02.41	01.10	1 411.11	400.02	1 27 1.00	1 201.00	04.02	10.700		
10 200.00	8 915.10	10 177.47	8 940.91	35.53	34.04	91.16	1 517.60	497.24	1 271.37	1 203.72	67.64	18.795		
10 300.00	8 920.50	10 277.47	8 946.32	37.16	35.71	91.16	1 617.44	495.55	1 271.35	1 200.33	71.02	17.902		
10 400.00	8 925.91	10 377.47	8 951.72	38.81	37.40	91.16	1 717.28	493.87	1 271.33	1 196.90	74.44	17.079		
10 500.00 10 600.00	8 931.32 8 936 73	10 477.47 10 577 47	8 957.13 8 962.54	40.50 42.20	39.11 40.83	91.16 91.16	1 817.12 1 916.96	492.19 490.51	1 271.32 1 271.30	1 193.42	77.90 81.40	16.320 15.619		
10 000.00	8 936.73	10 577.47	0 302.04	42.20	<del>-</del> 0.03	31.10	1 9 10.90	490.51	1 21 1.30	1 189.91	01.40	10.018		
10 700.00	8 942.14	10 677.47	8 967.95	43.92	42.58	91.16	2 016.80	488.83	1 271.28	1 186.36	84.92	14.970		
10 800.00	8 947.54	10 777.47	8 973.35	45.66	44.34	91.16	2 116.64	487.14	1 271.27	1 182.79	88.48	14.368		
10 900.00	8 952.95	10 877.47	8 978.76	47.41	46.11	91.16	2 216.48	485.46	1 271.25	1 179.20	92.06	13.809		
11 000.00	8 958.36 8 963 77	10 977.47	8 984.17	49.17	47.90 49.70	91.16	2 316.32	483.78	1 271.24	1 175.58	95.66	13.290		
11 100.00	8 963.77	11 077.47	8 989.58	50.95	49.70	91.16	2 416.16	482.10	1 271.22	1 171.94	99.28	12.805		
11 200.00	8 969.18	11 177.47	8 994.98	52.74	51.50	91.16	2 516.00	480.42	1 271.20	1 168.29	102.91	12.352		
11 300.00	8 974.58	11 277.47	9 000.39	54.53	53.32	91.16	2 615.84	478.73	1 271.19	1 164.62	106.56	11.929		
11 400.00	8 979.99	11 377.47	9 005.80	56.34	55.14	91.16	2 715.68	477.05	1 271.17	1 160.94	110.23	11.532		
11 500.00	8 985.40	11 477.47	9 011.20	58.15	56.96	91.16	2 815.52	475.37	1 271.15	1 157.25	113.90	11.160		
11 600.00	8 990.81	11 577.47	9 016.61	59.97	58.80	91.16	2 915.36	473.69	1 271.14	1 153.54	117.59	10.810		
11 700.00	8 996.21	11 677.47	9 022.02	61.80	60.64	91.16	3 015.20	472.01	1 271.12	1 149.83	121.29	10.480		
							rgent point SE							



#### Weatherford International Ltd.

### Anticollision Report

MD Reference:



eport Weatherford

Company: NEWFIELD EXPLORATION CO.
Project: DUCHESNE COUNTY, UT

Reference Site: UTE TRIBAL 13 and 14-9-4-3-2WH PAD

Site Error: 0.00 ft

Reference Well: UTE TRIBAL 13-9-4-3-2WH

Well Error: 0.00 ft

Reference Wellbore UTE TRIBAL 13-9-4-3-2WH

Reference Design: Design #2

Local Co-ordinate Reference:
TVD Reference:

ference: Well UTE TRIBAL 13-9-4-3-2WH
WELL @ 5284.00ft (Pioneer 78)
WELL @ 5284.00ft (Pioneer 78)

North Reference: True

Survey Calculation Method: Minimum Curvature

Output errors are at 2.00 sigma

Database: EDM 5000.1 Single User Db

Offset TVD Reference: Offset Datum

Offset Des	•	UTE TF 9-MWD	RIBAL 13 a	and 14-9-4-3	3-2WH PA	AD - UTE TF	RIBAL 14-9-4-3	3-2WH - UT	E TRIBAL	14-9-4-3-	2WH - D		Offset Site Error: Offset Well Error:	0.00 ft 0.00 ft
Refer		Offs	et	Semi Major	Axis				Dista	ance			Onset Well Effor:	0.00 II
Measured Depth	Vertical Depth	Measured Depth	Vertical Depth	Reference	Offset	Highside Toolface	Offset Wellbore	e Centre +E/-W	Between Centres	Between Ellipses	Minimum Separation	Separation Factor	Warning	
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(°)	(ft)	(ft)	(ft)	(ft)	(ft)			
11 800.00	9 001.62	11 777.47	9 027.43	63.63	62.48	91.16	3 115.04	470.33	1 271.10	1 146.10	125.00	10.169		
11 900.00	9 007.03	11 877.47	9 032.83	65.47	64.33	91.16	3 214.88	468.64	1 271.09	1 142.37	128.72	9.875		
12 000.00	9 012.44	11 977.47	9 038.24	67.31	66.19	91.16	3 314.72	466.96	1 271.07	1 138.63	132.44	9.597		
12 100.00	9 017.85	12 077.47	9 043.65	69.16	68.05	91.16	3 414.56	465.28	1 271.05	1 134.88	136.17	9.334		
12 200.00	9 023.25	12 177.47	9 049.05	71.01	69.91	91.16	3 514.40	463.60	1 271.04	1 131.13	139.91	9.085		
12 300.00	9 028.66	12 277.47	9 054.46	72.87	71.77	91.16	3 614.24	461.92	1 271.02	1 127.37	143.65	8.848		
12 400.00	9 034.07	12 377.47	9 059.87	74.72	73.64	91.16	3 714.07	460.23	1 271.00	1 123.60	147.40	8.623		
12 500.00	9 039.48	12 477.47	9 065.28	76.59	75.51	91.16	3 813.91	458.55	1 270.99	1 119.83	151.16	8.408		
12 600.00	9 044.89	12 577.47	9 070.68	78.45	77.39	91.16	3 913.75	456.87	1 270.97	1 116.05	154.92	8.204		
12 700.00	9 050.29	12 677.47	9 076.09	80.32	79.26	91.16	4 013.59	455.19	1 270.95	1 112.27	158.68	8.010		
12 800.00	9 055.70	12 777.47	9 081.50	82.19	81.14	91.16	4 113.43	453.51	1 270.94	1 108.49	162.45	7.824		
12 900.00	9 061.11	12 877.47	9 086.90	84.06	83.02	91.16	4 213.27	451.82	1 270.92	1 104.70	166.22	7.646		
13 000.00	9 066.52	12 977.47	9 092.31	85.94	84.91	91.16	4 313.11	450.14	1 270.90	1 100.91	170.00	7.476		
13 100.00	9 071.92	13 077.47	9 097.72	87.82	86.79	91.16	4 412.95	448.46	1 270.89	1 097.11	173.77	7.313		
13 200.00	9 077.33	13 177.47	9 103.13	89.70	88.68	91.16	4 512.79	446.78	1 270.87	1 093.31	177.56	7.158		
13 300.00	9 082.74	13 277.47	9 108.53	91.58	90.57	91.16	4 612.63	445.10	1 270.85	1 089.51	181.34	7.008		
13 400.00	9 088.15	13 377.47	9 113.94	93.46	92.46	91.16	4 712.47	443.41	1 270.84	1 085.71	185.13	6.865		
13 500.00	9 093.56	13 477.47	9 119.35	95.35	94.35	91.16	4 812.31	441.73	1 270.82	1 081.90	188.92	6.727		
13 600.00	9 098.96	13 577.47	9 124.76	97.23	96.24	91.16	4 912.15	440.05	1 270.80	1 078.09	192.71	6.594		
13 700.00	9 104.37	13 677.47	9 130.16	99.12	98.14	91.16	5 011.99	438.37	1 270.79	1 074.28	196.51	6.467		
13 800.00	9 109.78	13 777.47	9 135.57	101.01	100.03	91.16	5 111.83	436.69	1 270.77	1 070.46	200.31	6.344		
13 900.00	9 115.19	13 877.47	9 140.98	102.90	101.93	91.16	5 211.67	435.01	1 270.75	1 066.65	204.11	6.226		
14 000.00	9 120.60	13 977.47	9 146.38	104.80	103.83	91.16	5 311.51	433.32	1 270.74	1 062.83	207.91	6.112		
14 100.00	9 126.00	14 077.47	9 151.79	106.69	105.72	91.16	5 411.35	431.64	1 270.72	1 059.01	211.71	6.002 5.896		
14 200.00 14 300.00	9 131.41 9 136.82	14 177.47 14 277.47	9 157.20 9 162.61	108.58 110.48	107.62 109.52	91.16 91.16	5 511.19 5 611.03	429.96 428.28	1 270.70 1 270.69	1 055.19 1 051.36	215.52 219.32	5.794		
14 000.00	0 100.02	14 211.41	0 102.01	110.40	100.02	01.10	0 011.00	420.20	1 27 0.00	1 001.00	210.02	0.704		
14 400.00	9 142.23	14 377.47	9 168.01	112.38	111.43	91.16	5 710.87	426.60	1 270.67	1 047.54	223.13	5.695		
14 500.00	9 147.64	14 477.47	9 173.42	114.27	113.33	91.16	5 810.70	424.91	1 270.65	1 043.71	226.94	5.599		
14 600.00	9 153.04	14 577.47	9 178.83	116.17	115.23	91.16	5 910.54	423.23	1 270.64	1 039.89	230.75	5.507		
14 700.00	9 158.45	14 677.47	9 184.23	118.07	117.14	91.16	6 010.38	421.55	1 270.62	1 036.06	234.56	5.417		
14 800.00	9 163.86	14 777.47	9 189.64	119.97	119.04	91.16	6 110.22	419.87	1 270.60	1 032.23	238.38	5.330		
14 900.00	9 169.27	14 877.47	9 195.05	121.88	120.95	91.16	6 210.06	418.19	1 270.59	1 028.39	242.19	5.246		
15 000.00	9 174.67	14 977.47	9 200.46	123.78	122.85	91.16	6 309.90	416.50	1 270.57	1 024.56	246.01	5.165		
15 100.00	9 180.08	15 077.47	9 205.86	125.68	124.76	91.16	6 409.74	414.82	1 270.55	1 020.73	249.83	5.086		
15 200.00	9 185.49	15 177.47	9 211.27	127.58	126.67	91.16	6 509.58	413.14	1 270.54	1 016.89	253.65	5.009		
15 300.00	9 190.90	15 277.47	9 216.68	129.49	128.57	91.16	6 609.42	411.46	1 270.52	1 013.06	257.47	4.935		
15 400 00	0.400.04	45 077 47	0.000.00	404.00	100.40	04.40	6 700 00	400.70	4 070 51	1 000 00	004.00	4.000		
15 400.00	9 196.31	15 377.47	9 222.08	131.39	130.48	91.16	6 709.26	409.78	1 270.51	1 009.22	261.29	4.863		
15 500.00 15 600.00	9 201.71 9 207.12	15 477.47 15 577.47	9 227.49 9 232.90	133.30 135.20	132.39 134.30	91.16 91.16	6 809.10 6 908.94	408.09 406.41	1 270.49 1 270.47	1 005.38 1 001.54	265.11 268.93	4.792 4.724		
15 700.00	9 207.12	15 677.47	9 232.90	137.11	136.21	91.16	7 008.78	404.73	1 270.47	997.70	272.75	4.724		
15 700.00	9 217.94	15 777.47	9 243.71	139.02	138.12	91.16	7 108.62	403.05	1 270.40	993.86	276.58	4.593		
	11104		10.71	.00.02			00.02	.00.00	. 2, 0, 14		2, 0.50			
15 900.00	9 223.35	15 877.47	9 249.12	140.93	140.03	91.16	7 208.46	401.37	1 270.42	990.02	280.40	4.531		
16 000.00	9 228.75	15 977.47	9 254.53	142.84	141.94	91.16	7 308.30	399.69	1 270.41	986.18	284.23	4.470		
16 100.00	9 234.16	16 077.47	9 259.93	144.74	143.85	91.16	7 408.14	398.00	1 270.39	982.34	288.05	4.410		
16 200.00	9 239.57	16 177.47	9 265.34	146.65	145.77	91.16	7 507.98	396.32	1 270.37	978.49	291.88	4.352		
16 300.00	9 244.98	16 277.47	9 270.75	148.56	147.68	91.16	7 607.82	394.64	1 270.36	974.65	295.71	4.296		
16 400.00	9 250.38	16 377.47	9 276.16	150.47	149.59	91.16	7 707.66	392.96	1 270.34	970.80	299.54	4.241		
16 500.00	9 255.79	16 477.47	9 281.56	152.38	151.50	91.16	7 807.50	391.28	1 270.32	966.96	303.36	4.187		
16 600.00	9 261.20	16 577.47	9 286.97	154.29	153.42	91.16	7 907.34	389.59	1 270.31	963.11	307.19	4.135		
16 700.00	9 266.61	16 677.47	9 292.38	156.21	155.33	91.16	8 007.17	387.91	1 270.29	959.27	311.02	4.084		
16 800.00	9 272.02	16 777.47	9 297.79	158.12	157.25	91.16	8 107.01	386.23	1 270.27	955.42	314.85	4.034		
16 000 00	0.077.40	16 077 47	0.202.40	400.00	150.40	04.40	0 000 05	204.55	4 070 00	054.53	040.00	0.000		
16 900.00	9 277.42	16 877.47	9 303.19	160.03	159.16	91.16	8 206.85	384.55	1 270.26	951.57	318.68	3.986		



#### Weatherford International Ltd.

Anticollision Report



**Weatherford** 

Company: NEWFIELD EXPLORATION CO. Project: DUCHESNE COUNTY, UT

UTE TRIBAL 13 and 14-9-4-3-2WH PAD Reference Site:

Site Error: 0.00 ft

Reference Well: UTE TRIBAL 13-9-4-3-2WH

Well Error: 0.00 ft

UTE TRIBAL 13-9-4-3-2WH Reference Wellbore

Reference Design: Design #2 Local Co-ordinate Reference:

TVD Reference: MD Reference: North Reference:

**Survey Calculation Method:** 

Output errors are at

Database:

Offset TVD Reference:

Well UTE TRIBAL 13-9-4-3-2WH

WELL @ 5284.00ft (Pioneer 78) WELL @ 5284.00ft (Pioneer 78)

True

Minimum Curvature

2.00 sigma

EDM 5000.1 Single User Db

Offset Datum

Offset De	- 5		IBAL 13 a	and 14-9-4-3	-2WH PA	D - UTE TF	RIBAL 14-9-4-3	3-2WH - UT	E TRIBAL	14-9-4-3-	2WH - D		Offset Site Error:	0.00 ff
Survey Prog		9-MWD											Offset Well Error:	0.00 f
Refer		Offse		Semi Major					Dista					
Measured	Vertical	Measured	Vertical	Reference	Offset	Highside	Offset Wellbor		Between	Between	Minimum	Separation	Warning	
Depth (ft)	Depth (ft)	Depth (ft)	Depth (ft)	(ft)	(ft)	Toolface (°)	+N/-S (ft)	+E/-W (ft)	Centres (ft)	Ellipses (ft)	Separation (ft)	Factor		
17 000.00	9 282.83	16 977.47	9 308.60	161.94	161.07	91.16	8 306.69	382.87	1 270.24	947.72	322.52	3.939		
17 100.00	9 288.24	17 077.47	9 314.01	163.85	162.99	91.16	8 406.53	381.18	1 270.22	943.87	326.35	3.892		
17 200.00	9 293.65	17 177.47	9 319.41	165.77	164.91	91.16	8 506.37	379.50	1 270.21	940.03	330.18	3.847		
17 300.00	9 299.06	17 277.47	9 324.82	167.68	166.82	91.16	8 606.21	377.82	1 270.19	936.18	334.01	3.803		
17 400.00	9 304.46	17 377.47	9 330.23	169.59	168.74	91.16	8 706.05	376.14	1 270.17	932.33	337.85	3.760		
17 500.00	9 309.87	17 477.47	9 335.64	171.51	170.65	91.16	8 805.89	374.46	1 270.16	928.48	341.68	3.717		
17 600.00	9 315.28	17 577.47	9 341.04	173.42	172.57	91.16	8 905.73	372.78	1 270.14	924.62	345.52	3.676		
17 700.00	9 320.69	17 677.47	9 346.45	175.34	174.49	91.16	9 005.57	371.09	1 270.12	920.77	349.35	3.636		
17 800.00	9 326.10	17 777.47	9 351.86	177.25	176.40	91.16	9 105.41	369.41	1 270.11	916.92	353.19	3.596		
17 900.00	9 331.50	17 877.47	9 357.26	179.17	178.32	91.16	9 205.25	367.73	1 270.09	913.07	357.02	3.557		
18 000.00	9 336.91	17 977.47	9 362.67	181.08	180.24	91.16	9 305.09	366.05	1 270.07	909.22	360.86	3.520		
18 100.00	9 342.32	18 077.47	9 368.08	183.00	182.15	91.16	9 404.93	364.37	1 270.06	905.36	364.69	3.483		
18 200.00	9 347.73	18 177.47	9 373.49	184.91	184.07	91.16	9 504.77	362.68	1 270.04	901.51	368.53	3.446		
18 300.00	9 353.13	18 277.47	9 378.89	186.83	185.99	91.16	9 604.61	361.00	1 270.02	897.66	372.37	3.411		
18 400.00	9 358.54	18 377.47	9 384.30	188.75	187.91	91.16	9 704.45	359.32	1 270.01	893.80	376.20	3.376		
18 500.00	9 363.95	18 477.47	9 389.71	190.66	189.82	91.16	9 804.29	357.64	1 269.99	889.95	380.04	3.342		
18 600.00	9 369.36	18 577.47	9 395.11	192.58	191.74	91.16	9 904.13	355.96	1 269.97	886.10	383.88	3.308		
18 700.00	9 374.77	18 677.47	9 400.52	194.49	193.66	91.16	10 003.97	354.27	1 269.96	882.24	387.72	3.275		
18 800.00	9 380.17	18 777.47	9 405.93	196.41	195.58	91.16	10 103.81	352.59	1 269.94	878.39	391.56	3.243		
18 900.00	9 385.58	18 877.47	9 411.34	198.33	197.50	91.16	10 203.64	350.91	1 269.92	874.53	395.39	3.212		
19 000.00	9 390.99	18 977.47	9 416.74	200.25	199.42	91.16	10 303.48	349.23	1 269.91	870.68	399.23	3.181		
19 100.00	9 396.40	19 077.47	9 422.15	202.16	201.34	91.16	10 403.32	347.55	1 269.89	866.82	403.07	3.151		
19 200.00	9 401.81	19 177.47	9 427.56	204.08	203.26	91.16	10 503.16	345.86	1 269.87	862.96	406.91	3.121		
19 300.00	9 407.21	19 277.47	9 432.97	206.00	205.17	91.16	10 603.00	344.18	1 269.86	859.11	410.75	3.092		
19 322.15	9 408.41	19 299.63	9 434.16	206.42	205.60	91.16	10 625.12	343.81	1 269.85	858.25	411.60	3.085 S	F	



#### Weatherford International Ltd.

### Anticollision Report



Weatherford

Company: NEWFIELD EXPLORATION CO. Project: DUCHESNE COUNTY, UT

UTE TRIBAL 13 and 14-9-4-3-2WH PAD Reference Site:

Site Error: 0.00 ft

Reference Well: UTE TRIBAL 13-9-4-3-2WH

Well Error: 0.00 ft

Reference Wellbore UTE TRIBAL 13-9-4-3-2WH

Reference Design: Design #2 Local Co-ordinate Reference:

TVD Reference: MD Reference:

North Reference:

**Survey Calculation Method:** 

Output errors are at Database:

Offset TVD Reference:

Well UTE TRIBAL 13-9-4-3-2WH WELL @ 5284.00ft (Pioneer 78)

WELL @ 5284.00ft (Pioneer 78)

True

Minimum Curvature

2.00 sigma

EDM 5000.1 Single User Db

Offset Datum

Reference Depths are relative to WELL @ 5284.00ft (Pioneer 78)

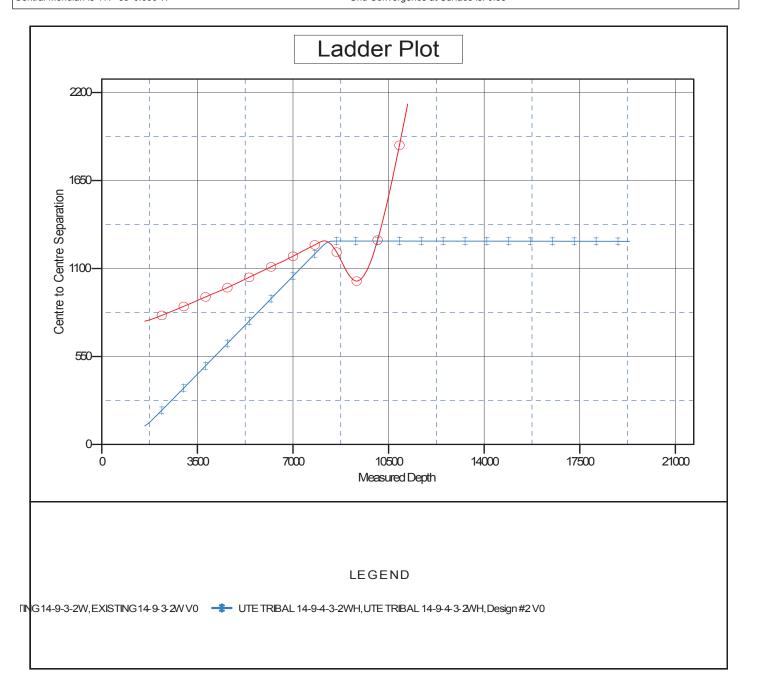
Offset Depths are relative to Offset Datum

Central Meridian is 111° 30' 0.000 W

Coordinates are relative to: UTE TRIBAL 13-9-4-3-2WH

Coordinate System is US State Plane 1983, Utah Central Zone

Grid Convergence at Surface is: 0.88°





#### Weatherford International Ltd.

### Anticollision Report



Weatherford

NEWFIELD EXPLORATION CO. Company: DUCHESNE COUNTY. UT Project:

UTE TRIBAL 13 and 14-9-4-3-2WH PAD Reference Site:

Site Error: 0.00 ft

Reference Well: UTE TRIBAL 13-9-4-3-2WH

Well Error: 0.00 ft

Reference Wellbore UTE TRIBAL 13-9-4-3-2WH

Reference Design: Design #2 Local Co-ordinate Reference:

Well UTE TRIBAL 13-9-4-3-2WH WELL @ 5284.00ft (Pioneer 78) TVD Reference: MD Reference: WELL @ 5284.00ft (Pioneer 78)

North Reference: True

Survey Calculation Method: Minimum Curvature

Output errors are at 2.00 sigma

Database: EDM 5000.1 Single User Db

Offset TVD Reference: Offset Datum

Reference Depths are relative to WELL @ 5284.00ft (Pioneer 78)

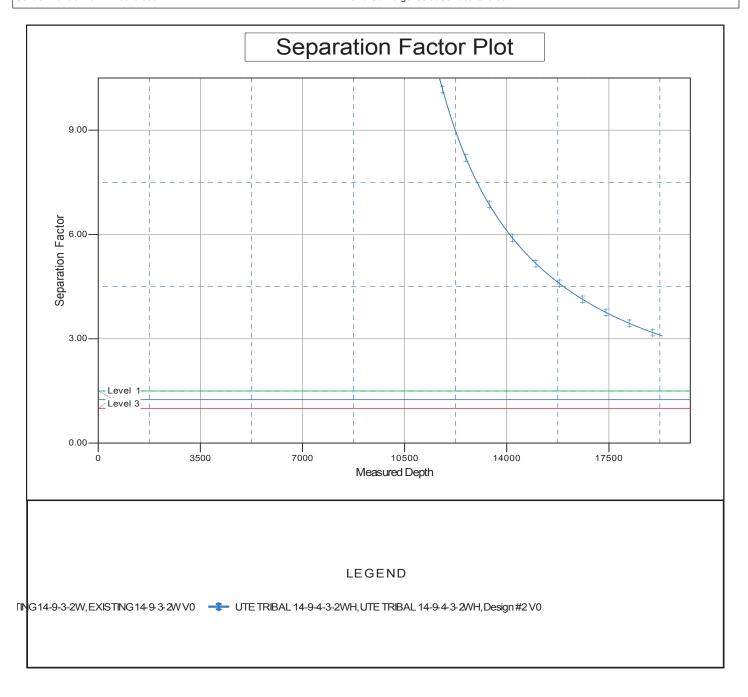
Offset Depths are relative to Offset Datum

Central Meridian is 111° 30' 0.000 W

Coordinates are relative to: UTE TRIBAL 13-9-4-3-2WH

Coordinate System is US State Plane 1983, Utah Central Zone

Grid Convergence at Surface is: 0.88°



	STATE OF UTAH		FORM 9
	DEPARTMENT OF NATURAL RESOUF DIVISION OF OIL, GAS, AND M		5.LEASE DESIGNATION AND SERIAL NUMBER: 1420H626269
SUNDR	RY NOTICES AND REPORTS	ON WELLS	6. IF INDIAN, ALLOTTEE OR TRIBE NAME:
	posals to drill new wells, significantly reenter plugged wells, or to drill horiz n for such proposals.		7.UNIT or CA AGREEMENT NAME:
1. TYPE OF WELL Oil Well			8. WELL NAME and NUMBER: UTE TRIBAL 13-9-4-3-2WH
2. NAME OF OPERATOR: NEWFIELD PRODUCTION CO	DMPANY		9. API NUMBER: 43013520790000
3. ADDRESS OF OPERATOR: 1001 17th Street, Suite 200	00 , Denver, CO, 80202	PHONE NUMBER: 303 382-4443 Ext	9. FIELD and POOL or WILDCAT: NORTH MYTON BENCH
4. LOCATION OF WELL FOOTAGES AT SURFACE: 0276 FNL 1452 FWL		COUNTY: DUCHESNE	
QTR/QTR, SECTION, TOWNSH	HIP, RANGE, MERIDIAN: 16 Township: 03.0S Range: 02.0W Me	eridian: U	STATE: UTAH
11. CHEC	K APPROPRIATE BOXES TO INDICA	ATE NATURE OF NOTICE, RE	PORT, OR OTHER DATA
TYPE OF SUBMISSION		1	
	ACIDIZE	ALTER CASING	CASING REPAIR
NOTICE OF INTENT Approximate date work will start:	CHANGE TO PREVIOUS PLANS	CHANGE TUBING	CHANGE WELL NAME
Approximate date work will start:	CHANGE WELL STATUS	COMMINGLE PRODUCING FORMATION	S CONVERT WELL TYPE
SUBSEQUENT REPORT Date of Work Completion:	DEEPEN	FRACTURE TREAT	NEW CONSTRUCTION
3/24/2014	OPERATOR CHANGE	PLUG AND ABANDON	PLUG BACK
SPUD REPORT Date of Spud:	PRODUCTION START OR RESUME	RECLAMATION OF WELL SITE	☐ RECOMPLETE DIFFERENT FORMATION
	REPERFORATE CURRENT FORMATION	SIDETRACK TO REPAIR WELL	L TEMPORARY ABANDON
DRILLING REPORT	L TUBING REPAIR	VENT OR FLARE	WATER DISPOSAL
Report Date:	WATER SHUTOFF	SI TA STATUS EXTENSION	APD EXTENSION
	WILDCAT WELL DETERMINATION	✓ OTHER	OTHER: FIRMUS Construction Materia
l .	COMPLETED OPERATIONS. Clearly show a attached FIRMUS Process	Post Job Report.	Accepted by the Utah Division of Oil, Gas and Mining FOR RECORD ONLY August 26, 2014
NAME (PLEASE PRINT) Melissa Luke	<b>PHONE NUM</b> 303 323-9769	BER TITLE Regulatory Technician	
SIGNATURE N/A		<b>DATE</b> 8/26/2014	
11//1		U/LU/LU   T	

### Firmus® Process Subsequent Sundry Notice:

This Subsequent Sundry Notice is being submitted to report that the drill pad at the Ute Tribal 13-9-4-3-2WH/14-9-4-3-2WH location was constructed predominantly from oil base drilling cuttings that had been generated during earlier drilling at the locations listed below. After the drilling at those earlier-drilled locations, the cuttings were prestabilized, and a total of 4,550 Loose Cubic Yards (LCY) of these prestabilized drill cuttings from the locations listed below were assembled at the Ute Tribal 13-9-4-3-2WH/14-9-4-3-2WH location, where they were consolidated by a Firmus® process into the drilling pad for that location. Attached is the Firmus® Process Post Job Report for your review and records.

The previously drilled locations from which pre-stabilized drilling cuttings were taken and the amounts taken from each location were: (1). Ute Tribal 4-1-12-3-4WH (API #43013516420000): 901 LCY; (2). Ute Tribal 16-12-1-3-4WH (API #43013515480000): 790 LCY; (3) Close 4-15-22-3-2WH (API #43013521060000): 1186 LCY; (4) Lejune 1-17-3-2WH (API #43013518530000): 1088 LCY; and (5) Patterson 4-9-3-3WH (API #43013521080000): 585 LCY.



**Newfield Exploration Company** 

PH 303-893-0102 | FAX 303-893-0103

1001 17th Street | Suite 2000

Denver, Colorado 80202

March 13, 2014

Murray Sheep Ranch, LLC c/o Dallas Murray, Manager P.O. Box 96 Myton, UT 84052

RE:

Oil Based Mud Cuttings

Township 3 South, Range 2 West

Section 16: N2NW Duchesne County, Utah

Dear Mr. Murray:

Newfield Production Company ("Newfield") is preparing to construct the UT 13-9-4-3-2WH and UT 14-9-4-3-2WH access road and drillsite location on your property. Newfield requests your permission to use treated oil based mud cuttings in the construction process of the aforementioned drillsite location. Oil based mud is often used in the drilling process, but once drilling is completed, the oil based mud cuttings are dried and treated to render them harmless, known as a "Post-Firmus Process", and usable as a base material for drillsite construction.

In the application process, a six (6) inch layer of the treated oil based mud cuttings will be distributed over the natural ground, or subgrade of the location, and will serve as the base layer of the drillsite location. Lastly, a two to three (2-3) inch layer of gravel will be laid over the top of the treated oil based mud cuttings to complete the construction process. The benefits of using the treated oil based mud cuttings include decreased maintenance from weather related erosion and vastly improved dust control compared to standard building materials. Furthermore, the Post-Firmus Process is environmentally friendly and the treated cuttings serve as an excellent top soil upon reclamation of the drillsite.

If the forgoing meets your approval, please sign in the space provided.

If you have any questions, I can be reached at (303) 383-4153.

Sincerely.

Peter Burns Sr. Landman

pburns@newfield.com

AGREED to and ACCEPTED this 13th day of March

Murray Sheep Ranch, LLC

By: Dallas Murray, Manager

### FIRMUS® POST JOB REPORT

WELL NAME: Ute Tribal 13/14-9-4-3-2WH

AFE #: 40648D/40651D

REPORT DATE: <u>07/08/14</u>

START DATE: <u>03/24/14</u>

COMPLETION DATE: 04/12/14

SCOTT QUOTE #: FC2801-UT

COUNTY: Duchesne

LATITUDE: 40° 13' 42.68" North

LONGITUDE: 110° 07' 08.3" West

### JOB SUMMARY:

Drill Cuttings were Pre-stabilized on the following wells either during drilling or after drilling was completed.

Well Name	AFE#	Sampling Date	<u>Volume</u>
Ute Tribal 4-1-12-3-4WH	27715D	9/17/2013	901 LCY
Ute Tribal 16-12-1-3-4WH	40432D	8/22/2013	790 LCY
Close 4-15-22-3-2WH	40709D	11/12/2013	1186 LCY
Lejeune 1-17-3-2WH	27960D	10/14/2013	1088 LCY
Patterson 4-9-3-3WH	40635D	10/14/2013	585 LCY

A total of 4550 Loose Cubic Yards (LCY) of Pre-stabilized construction material was placed in a 430' x 360' pad area less a 130' x 100' pit area to form the drill pad at the Ute Tribal 13/14-9-4-3-2WH

Analytical testing was performed on the cuttings from the generating locations. Confirmatory sampling and testing was performed on the receiving site. Confirmatory samples are taken on every 1,000 Compacted Cubic Yards (CCY) of pre-stabilized cuttings. Four grab samples are taken from each 1,000 CCY and composited for testing. All confirmatory Leachate and Geotechnical results fall within acceptable levels.

### **Enclosed**

Confirmatory Leachate Summary page 2
Confirmatory Geotechnical Summary page 2
Initial Analytical Summary page 3

Firmus® Location: FC2801-UT Ute Tribal 13/14-9-4-3-2WH

### **CONFIRMATORY TEST SUMMARY**

	Le	eachate Sui	mmary
	Sample A	Sample B	Sample C
Benzene (mg/kg)	<0.00500	<0.00500	<0.00500
C6-C36 TPH (mg/L)	2.54	4.05	3.11
pH (su)	11.9	12.0	12.1
Chloride (mg/L)	266	269	283
	Met	als	
SPLP Arsenic (mg/L)	<0.0100	<0.0100	<0.0100
SPLP Cadmium (mg/L)	<0.00500	<0.00500	<0.00500
SPLP Barium (mg/L)	<2.00	<2.00	<2.00
SPLP Chromium (mg/L)	<0.100	<0.100	<0.100
SPLP Lead (mg/L)	<0.00500	<0.00500	<0.00500
SPLP Mercury (mg/L)	<0.00200	<0.00200	<0.00200
SPLP Selenium (mg/L)	<0.0500	<0.0500	<0.0500
SPLP Silver (mg/L)	<0.100	<0.100	<0.100
SPLP Zinc (mg/L)	<5.00	<5.00	<5.00

Teach resta								
	Geotechnical Summary							
	Α	В	С					
Compressive								
Strength	314.5	338.7	419.7					
(psi)	1							
Hydraulic								
Conductivity	4.52E-08	2.57E-08	2.38E-08					
	4.52E-08	2.57E-08	2.38E-08					

Firmus® Location: FC2801-UT Ute Tribal 13/14-9-4-3-2WH

### **ANALYTICAL SUMMARY**

HI MENTER			ocations		
	Ute Tribal 4- 1-12-3-4WH Pioneer Rig # 78	Ute Tribal 16-12-1-3- 4WH Pioneer Rig # 78	Close 4-15- 22-3-2WH Pioneer Rig # 78	Lejeune 1- 17-3-2WH Pioneer Rig #44	Patterson 4- 9-3-3WH Pioneer Rig #44
Cubic Yards	901	790	1,186	1,088	585
Total Solids (%)	91.3	88.2	91.5	88.0	89.6
Benzene (mg/kg)	<0.103	<0.250	<0.250	<0.136	<0.192
C6-C36 TPH (mg/kg)	102,000	239,000	111,000	153,000	141,000
pH (su)	10.1	11.1	11.2	10.8	10.7
Chloride (mg/kg)	3,260	1,800	2,290	4,940	8,320
Sulfates (mg/kg)	7,510	<100	592	503	509
		Metal	s		
Arsenic (mg/kg)	6.86	3.44	5.63	4.45	4.21
Cadmium (mg/kg)	<2.50	<2.50	<2.50	<2.50	<2.50
True Total Barium (mg/kg)	194,000	406,000	259,000	239,000	175,000
Chromium (mg/kg)	16.8	7.01	13.8	9.28	13.1
Lead (mg/kg)	3.91	<2.50	6.95	6.25	8.54
Mercury (mg/kg)	0.217	0.0848	0.109	0.0496	0.056
Selenium (mg/kg)	<2.50	<2.50	<2.50	<2.50	<2.50
Silver (mg/kg)	<2.50	<2.50	<2.50	<2.50	<2.50
Zinc (mg/kg)	31.5	21.6	15.4	26.9	49.3



### **Ute Tribal 13/14-9-4-3-2WH** FC2801-UT

GCO Labs, LLC 3505 West Loop 281 Longview, Texas 75604 903 / 291-0137 www.gco-labs.com

**Customer:** 

J. Blake Scott

Scott Environmental Services, Inc.

P.O. Box 6215

Longview, Texas 75608

USA

Project: FC2801-UT Cust. Sample: Firmus-A

Collected; 4/9/2014

Received: 6/10/2014

Lab ID: 140610N001

Report Date: 6/25/2014

Lab 19. 1400 101	1001		Report Date. 0/20	7201-1		
Analysis	Results	Units	Method	Date	Time	Tech
Chloride, 7-Day Leach	266	mg/L	LA 29B	6/24/2014	11:31	fgo
pH@25C on 7-Day Leach	11.9	SU	LA 29B	6/18/2014	13:20	fgo
Prep. 7-Day Day Leachate	400/115	mL/g	LA 29B	6/18/2014	12:00	fgo
Total Solids for Dry Wt	93.2	%	SM 2540 G	6/10/2014	14:45	fgo
SPLP Extraction: Non-Volatile	Completed	Result	SW-846 1312	6/24/2014	10:27	fgo
SPLP ZHE Extraction	100% Solid	mL/g	SW-846 1312	6/10/2014	15:15	fgo
Metals Digestion SPLP 3010	50/100	mL/mL	SW-846 3010B	6/15/2014	8:50	fgo
SPLP Arsenic	< 0.0100	mg/L	SW-846 6010B	6/17/2014	13:01	fgo
SPLP Barium	< 2.00	mg/L	SW-846 6010B	6/17/2014	13:01	fgo
SPLP Cadmium	< 0.00500	mg/L	SW-846 6010B	6/17/2014	13:01	fgo
SPLP Chromium	< 0.100	mg/L	SW-846 6010B	6/17/2014	13:01	fgo
SPLP Lead	< 0.00500	mg/L	SW-846 6010B	6/17/2014	13:01	fgo
SPLP Selenium	< 0.0500	mg/L	SW-846 6010B	6/17/2014	13:01	fgo
SPLP Silver	< 0.100	mg/L	SW-846 6010B	6/17/2014	13:01	fgo
SPLP Zinc	< 5.00	mg/L	SW-846 6010B	6/17/2014	13:01	fgo
Metal Digestion SPLP 7470	50/50	mL/mL	SW-846 7470A	6/17/2014	11:10	fgo
SPLP Mercury	< 0.00200	mg/L	SW-846 7470A	6/18/2014	10:52	fgo
SPLP Benzene	< 0.00500	mg/L	SW-846 8260B	6/24/2014	3:40	fgo
1005 TPH Extraction	3/116	mL/mL	TNRCC TX 1005	6/18/2014	11:19	fgo
C12 - C28 TPH, 7-Day Leach	2.54	mg/L	TNRCC TX 1005	6/23/2014	18:33	fgo
C28 - C36 TPH, 7-Day Leach	< 1.50	mg/L	TNRCC TX 1005	6/23/2014	18:33	fgo
C6 - C12 TPH, 7-Day Leach	< 1.50	mg/L	TNRCC TX 1005	6/23/2014	18:33	fgo
C6 - C36 TPH, 7-Day Leach	2.54	mg/L	TNRCC TX 1005	6/23/2014	18:33	fgo

Page 1 of 7 Report: 140610N001-3 Project: FC2801-UT



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Project: **FC2801-UT**Cust. Sample: **Firmus-B**Collected; 4/9/2014

Received: 6/10/2014

Lab ID: 140610N002 Report Date: 6/25/2014

Eap 15. 1 100 101	1002		. topoit = ato. o.=			
Analysis	Results	Units	Method	Date	Time	Tech
Chloride, 7-Day Leach	269	mg/L	LA 29B	6/24/2014	13:31	fgo
pH@25C on 7-Day Leach	12.0	SU	LA 29B	6/18/2014	13:20	fgo
Prep. 7-Day Day Leachate	400/114	mL/g	LA 29B	6/18/2014	12:00	fgo
Total Solids for Dry Wt	93.3	%	SM 2540 G	6/10/2014	14:45	fgo
SPLP Extraction: Non-Volatile	Completed	Result	SW-846 1312	6/24/2014	10:27	fgo
SPLP ZHE Extraction	100% Solid	mL/g	SW-846 1312	6/11/2014	15:38	fgo
Metals Digestion SPLP 3010	50/100	mL/mL	SW-846 3010B	6/15/2014	8:50	fgo
SPLP Arsenic	< 0.0100	mg/L	SW-846 6010B	6/17/2014	13:01	fgo
SPLP Barium	< 2.00	mg/L	SW-846 6010B	6/17/2014	13:01	fgo
SPLP Cadmium	< 0.00500	mg/L	SW-846 6010B	6/17/2014	13:01	fgo
SPLP Chromium	< 0.100	mg/L	SW-846 6010B	6/17/2014	13:01	fgo
SPLP Lead	< 0.00500	mg/L	SW-846 6010B	6/17/2014	13:01	fgo
SPLP Selenium	< 0.0500	mg/L	SW-846 6010B	6/17/2014	13:01	fgo
SPLP Silver	< 0.100	mg/L	SW-846 6010B	6/17/2014	13:01	fgo
SPLP Zinc	< 5.00	mg/L	SW-846 6010B	6/17/2014	13:01	fgo
Metal Digestion SPLP 7470	50/50	mL/mL	SW-846 7470A	6/17/2014	11:10	fgo
SPLP Mercury	< 0.00200	mg/L	SW-846 7470A	6/18/2014	10:52	fgo
SPLP Benzene	< 0.00500	mg/L	SW-846 8260B	6/24/2014	2:10	fgo
1005 TPH Extraction	3/116	mL/mL	TNRCC TX 1005	6/18/2014	11:19	fgo
C12 - C28 TPH, 7-Day Leach	2.70	mg/L	TNRCC TX 1005	6/23/2014	20:09	fgo
D28 - C36 TPH, 7-Day Leach	< 1.50	mg/L	TNRCC TX 1005	6/23/2014	20:09	fgo
C6 - C12 TPH, 7-Day Leach	< 1.50	mg/L	TNRCC TX 1005	6/23/2014	20:09	fgo
C6 - C36 TPH, 7-Day Leach	4.05	mg/L	TNRCC TX 1005	6/23/2014	20:09	fgo

Project: FC2801-UT Page 2 of 7 Report: 140610N001-3



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Project: **FC2801-UT** Collected; 4/9/2014

Cust. Sample: **Firmus-C** Received: 6/10/2014

Lab ID: 140610N003 Report Date: 6/25/2014

LUDID, 1400101	.000		rioport Date: 0,20			
Analysis	Results	Units	Method	Date	Time	Tech
Chloride, 7-Day Leach	283	mg/L	LA 29B	6/24/2014	13:44	fgo
pH@25C on 7-Day Leach	12.1	SU	LA 29B	6/18/2014	13:20	fgo
Prep. 7-Day Day Leachate	400/113	mL/g	LA 29B	6/18/2014	12:00	fgo
Total Solids for Dry Wt	93.5	%	SM 2540 G	6/10/2014	14:45	fgo
SPLP Extraction: Non-Volatile	Completed	Result	SW-846 1312	6/24/2014	10:27	fgo
SPLP ZHE Extraction	100% Solid	mL/g	SW-846 1312	6/12/2014	17:00	fgo
Metals Digestion SPLP 3010	50/100	mL/mL	SW-846 3010B	6/15/2014	8:50	fgo
SPLP Arsenic	< 0.0100	mg/L	SW-846 6010B	6/17/2014	13:01	fgo
SPLP Barium	< 2.00	mg/L	SW-846 6010B	6/17/2014	13:01	fgo
SPLP Cadmium	< 0.00500	mg/L	SW-846 6010B	6/17/2014	13:01	fgo
SPLP Chromium	< 0.100	mg/L	SW-846 6010B	6/17/2014	13:01	fgo
SPLP Lead	< 0.00500	mg/L	SW-846 6010B	6/17/2014	13:01	fgo
SPLP Selenium	< 0.0500	mg/L	SW-846 6010B	6/17/2014	13:01	fgo
SPLP Silver	< 0.100	mg/L	SW-846 6010B	6/17/2014	13:01	fgo
SPLP Zinc	< 5.00	mg/L	SW-846 6010B	6/17/2014	13:01	fgo
Metal Digestion SPLP 7470	50/50	mL/mL	SW-846 7470A	6/17/2014	11:10	fgo
SPLP Mercury	< 0.00200	mg/L	SW-846 7470A	6/18/2014	10:52	fgo
SPLP Benzene	< 0.00500	mg/L	SW-846 8260B	6/24/2014	4:02	fgo
1005 TPH Extraction	3/116	mL/mL	TNRCC TX 1005	6/18/2014	11:19	fgo
C12 - C28 TPH, 7-Day Leach	3.11	mg/L	TNRCC TX 1005	6/23/2014	20:40	fgo
C28 - C36 TPH, 7-Day Leach	< 1.50	mg/L	TNRCC TX 1005	6/23/2014	20:40	fgo
C6 - C12 TPH, 7-Day Leach	< 1.50	mg/L	TNRCC TX 1005	6/23/2014	20:40	fgo
C6 - C36 TPH, 7-Day Leach	3.11	mg/L	TNRCC TX 1005	6/23/2014	20:40	fgo



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### **Quality Control Data**

Blank CCV1 CCV2 CCV3 Dup-A Dup-B Dup-RPD1 MS Blank CCV1 CCV2 LCS MS MSD MS-RPD Blank CCV1 CCV1 CCV2 CCS	Method Blank Recovery Recovery Recovery A Reading B Reading Relative% Difference Recovery Method Blank Recovery Recovery Recovery Recovery Recovery Redevery Recovery	< 5.0 ppm 105 % 93.1 % 92.9 % 266 ppm 258 ppm 3.34 % 102 % < 1.5 ppm 112 % 98 % 99.4 % 96.2 % 105 % 8.74 % < 1.5 ppm 128 %	True Value True Value True Value Spike Amount True Value True Value Spike Amount Spike Amount Spike Amount	20 ppm 10 ppm 10 ppm 8 ppm 1000 ppm 1000 ppm 1666 ppm 1666 ppm 1666 ppm
CCV2 CCV3 Dup-A Dup-B Dup-RPD1 MS Blank CCV1 CCV2 LCS MS MSD MS-RPD Blank CCV1	Recovery Recovery A Reading B Reading Relative% Difference Recovery Method Blank Recovery Recovery Recovery Recovery Recovery Recovery Redevery Recovery Redevery Redevery Relative% Difference Method Blank Recovery	93.1 % 92.9 % 266 ppm 258 ppm 3.34 % 102 % <1.5 ppm 112 % 98 % 99.4 % 96.2 % 105 % 8.74 % <1.5 ppm 128 %	True Value True Value Spike Amount True Value True Value Spike Amount Spike Amount Spike Amount	10 ppm 10 ppm 8 ppm 1000 ppm 1000 ppm 1666 ppm 1666 ppm 1666 ppm
CCV3 Dup-A Dup-B Dup-RPD1 MS Blank CCV1 CCV2 LCS MS MSD MS-RPD Blank CCV1	Recovery A Reading B Reading Relative% Difference Recovery Method Blank Recovery Recovery Recovery Recovery Recovery Recovery Relative% Difference Method Blank Recovery	92.9 % 266 ppm 258 ppm 3.34 % 102 % < 1.5 ppm 112 % 98 % 99.4 % 96.2 % 105 % 8.74 % < 1.5 ppm 128 %	True Value Spike Amount True Value True Value Spike Amount Spike Amount Spike Amount	8 ppm 1000 ppm 1000 ppm 1666 ppm 1666 ppm 1666 ppm
Dup-A Dup-B Dup-RPD1 MS Blank CCV1 CCV2 LCS MS MSD MS-RPD Blank CCV1	A Reading B Reading Relative% Difference Recovery Method Blank Recovery Recovery Recovery Recovery Recovery Redevery Recovery Redevery Redevery Relative% Difference Method Blank Recovery	266 ppm 258 ppm 3.34 % 102 % < 1.5 ppm 112 % 98 % 99.4 % 96.2 % 105 % 8.74 % < 1.5 ppm 128 %	Spike Amount  True Value  True Value  Spike Amount  Spike Amount  Spike Amount	8 ppm 1000 ppm 1000 ppm 1666 ppm 1666 ppm 1666 ppm
Dup-B Dup-RPD1 MS Blank CCV1 CCV2 LCS MS MSD MS-RPD Blank CCV1	B Reading Relative% Difference Recovery Method Blank Recovery Recovery Recovery Recovery Recovery Redevery Recovery Redevery Redevery Relative% Difference Method Blank Recovery	258 ppm 3.34 % 102 % < 1.5 ppm 112 % 98 % 99.4 % 96.2 % 105 % 8.74 % < 1.5 ppm 128 %	True Value True Value Spike Amount Spike Amount Spike Amount	1000 ppm 1000 ppm 1666 ppm 1666 ppm 1666 ppm
Dup-RPD1 MS Blank CCV1 CCV2 LCS MS MSD MS-RPD Blank CCV1	Relative% Difference Recovery Method Blank Recovery Recovery Recovery Recovery Recovery Recovery Redative% Difference Method Blank Recovery	3.34 % 102 % < 1.5 ppm 112 % 98 % 99.4 % 96.2 % 105 % 8.74 % < 1.5 ppm 128 %	True Value True Value Spike Amount Spike Amount Spike Amount	1000 ppm 1000 ppm 1666 ppm 1666 ppm 1666 ppm
MS Blank CCV1 CCV2 LCS MS MSD MS-RPD Blank CCV1	Recovery Method Blank Recovery Recovery Recovery Recovery Recovery Relative% Difference Method Blank Recovery	102 % < 1.5 ppm 112 % 98 % 99.4 % 96.2 % 105 % 8.74 % < 1.5 ppm 128 %	True Value True Value Spike Amount Spike Amount Spike Amount	1000 ppm 1000 ppm 1666 ppm 1666 ppm 1666 ppm
Blank CCV1 CCV2 LCS MS MSD MS-RPD Blank CCV1	Method Blank Recovery Recovery Recovery Recovery Recovery Relative% Difference Method Blank Recovery	< 1.5 ppm 112 % 98 % 99.4 % 96.2 % 105 % 8.74 % < 1.5 ppm 128 %	True Value True Value Spike Amount Spike Amount Spike Amount	1000 ppm 1000 ppm 1666 ppm 1666 ppm 1666 ppm
CCV1 CCV2 LCS MS MSD MS-RPD Blank CCV1	Recovery Recovery Recovery Recovery Recovery Relative% Difference Method Blank Recovery	112 % 98 % 99.4 % 96.2 % 105 % 8.74 % < 1.5 ppm 128 %	True Value Spike Amount Spike Amount Spike Amount	1000 ppm 1666 ppm 1666 ppm 1666 ppm
CCV2 LCS MS MSD MS-RPD Blank CCV1	Recovery Recovery Recovery Recovery Relative% Difference Method Blank Recovery	98 % 99.4 % 96.2 % 105 % 8.74 % < 1.5 ppm 128 %	True Value Spike Amount Spike Amount Spike Amount	1000 ppm 1666 ppm 1666 ppm 1666 ppm
LCS MS MSD MS-RPD Blank CCV1	Recovery Recovery Recovery Relative% Difference Method Blank Recovery	99.4 % 96.2 % 105 % 8.74 % < 1.5 ppm 128 %	Spike Amount Spike Amount Spike Amount True Value	1666 ppm 1666 ppm 1666 ppm
MS MSD MS-RPD Blank CCV1	Recovery Recovery Relative% Difference Method Blank Recovery	96.2 % 105 % 8.74 % < 1.5 ppm 128 %	Spike Amount Spike Amount True Value	1666 ppm 1666 ppm
MSD MS-RPD Blank CCV1	Recovery Relative% Difference Method Blank Recovery	105 % 8.74 % < 1.5 ppm 128 %	Spike Amount True Value	1666 ppm
MS-RPD Blank CCV1	Relative% Difference Method Blank Recovery	8.74 % < 1.5 ppm 128 %	True Value	1000 ppm
Blank CCV1	Method Blank Recovery	< 1.5 ppm 128 %		
CCV1	Recovery	128 %		
	·			
CCV2	Recovery	/		
		93.2 %	True Value	1000 ppm
LCS	Recovery	97.7 %	Spike Amount	1666 ppm
MS	Recovery	83.5 %	Spike Amount	1666 ppm
MSD	Recovery	94.3 %	Spike Amount	1666 ppm
MS-RPD	Relative% Difference	12.1 %		
Blank	Method Blank	< 0.0010 ppm		
CCV1	Recovery	83 %	True Value	0.02 ppm
LCS	Recovery	74.2 %	Spike Amount	0.02 ppm
LCSD	Recovery	73.9 %	Spike Amount	0.02 ppm
LCS-RPD	Relative% Difference	0.405 %		
MS	Recovery	72.5 %	Spike Amount	0.02 ppm
MSD	Recovery	75.9 %	Spike Amount	0.02 ppm
MS-RPD	Relative% Difference	4.58 %		
Dup-A(pH)	Reading	11.87 SU		
Dup-B(pH)	Reading	11.9 SU		
pH 10 Buffer(1st)	Reading	10.01 SU	True Value	10.01 SU
pH 7 Buffer(2nd)	Reading	7 SU	True Value	7 SU
Blank	Method Blank	< 0.10 ppm		
CCV1	Recovery	102 %	True Value	2 ppm
CCV2	Recovery	101 %	True Value	2 ppm
ICV	Recovery	103 %	True Value	1 ppm
	LCS MS MSD MS-RPD Blank CCV1 LCS LCSD LCS-RPD MS MSD MS-RPD Dup-A(pH) Dup-B(pH) DH 10 Buffer(1st) DH 7 Buffer(2nd) Blank CCV1 CCV2	Recovery MS Recovery MSD Recovery MS-RPD Relative% Difference Blank Method Blank CCV1 Recovery LCS Recovery LCSD Recovery LCS-RPD Relative% Difference MS Recovery MSD Recovery MSD Recovery MS-RPD Relative% Difference Dup-A(pH) Reading Dup-B(pH) Reading DH 10 Buffer(1st) Reading DH 7 Buffer(2nd) Reading Blank Method Blank CCV1 Recovery CCV2 Recovery	LCS         Recovery         97.7 %           MSD         Recovery         94.3 %           MS-RPD         Relative% Difference         12.1 %           Blank         Method Blank         < 0.0010 ppm	Recovery 97.7 % Spike Amount MSD Recovery 94.3 % Spike Amount MS-RPD Relative% Difference 12.1 %  Blank Method Blank <0.0010 ppm  CCV1 Recovery 74.2 % Spike Amount  LCS Recovery 74.2 % Spike Amount  LCSD Recovery 73.9 % Spike Amount  LCS-RPD Relative% Difference 0.405 %  MS Recovery 72.5 % Spike Amount  MSD Recovery 75.9 % Spike Amount  MSD Recovery 75.9 % Spike Amount  MS-RPD Relative% Difference 4.58 %  Dup-A(pH) Reading 11.87 SU  Dup-B(pH) Reading 11.9 SU  DH 10 Buffer(1st) Reading 7 SU True Value  DH 7 Buffer(2nd) Reading 7 SU True Value  Blank Method Blank <0.10 ppm  CCV1 Recovery 102 % True Value  True Value

Project: FC2801-UT Page 4 of 7 Report: 140610N001-3



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Analyte	QC Paramete	r	Result Units	Reference Value	Units
	LCS	Recovery	86.4 %	Spike Amount	0.2 ppm
	LCSD	Recovery	81.9 %	Spike Amount	0.2 ppm
	LCS-RPD	Relative% Difference	5.35 %		
	MS	Recovery	87.6 %	Spike Amount	0.2 ppm
	MSD	Recovery	87.7 %	Spike Amount	0.2 ppm
	MS-RPD	Relative% Difference	0.0776 %	·	
SPLP Arsenic	Blank	Method Blank	< 0.010 ppm		
	CCV1	Recovery	102 %	True Value	10 ppm
	CCV2	Recovery	99.5 %	True Value	10 ppm
	ICV	Recovery	99.7 %	True Value	5 ppm
	LCS	Recovery	85.4 %	Spike Amount	1 ppm
	LCSD	Recovery	84.7 %	Spike Amount	1 ppm
	LCS-RPD	Relative% Difference	0.781 %		. 1-1
	MS	Recovery	83.1 %	Spike Amount	1 ppm
	MSD	Recovery	81.9 %	Spike Amount	1 ppm
	MS-RPD	Relative% Difference	1.56 %	opino / intounc	
SPLP Barium	Blank	Method Blank	< 2.0 ppm		
or Li Dallalli	CCV1	Recovery	104 %	True Value	10 ppm
	CCV2	Recovery	103 %	True Value	10 ppm
	ICV	_	96.8 %	True Value	5 ppm
	LCS	Recovery Recovery	88.2 %	Spike Amount	1 ppm
	LCSD	·	83.9 %	Spike Amount	1 ppm
		Recovery Relative% Difference	4.97 %	Spike Amount	т ррпп
	LCS-RPD			Snika Amount	1 nnm
	MS	Recovery	84.1 % 82.9 %	Spike Amount	1 ppm
	MSD	Recovery		Spike Amount	1 ppm
NDI D. O. Julius	MS-RPD	Relative% Difference	1.43 %		
SPLP Cadmium	Blank	Method Blank	< 0.0050 ppm	True Value	Ennm
	CCV1	Recovery	102 %		5 ppm
	CCV2	Recovery	99.6 %	True Value	5 ppm
	ICV	Recovery	99.7 %	True Value	2.5 ppm
	LCS	Recovery	85.8 %	Spike Amount	0.5 ppm
	LCSD	Recovery	80.9 %	Spike Amount	0.5 ppm
	LCS-RPD	Relative% Difference	5.94 %	0 " 4 .	0.5
	MS	Recovery	77.9 %	Spike Amount	0.5 ppm
	MSD	Recovery	77 %	Spike Amount	0.5 ppm
	MS-RPD	Relative% Difference	1.24 %		
SPLP Chromium	Blank	Method Blank	< 0.10 ppm		40
	CCV1	Recovery	102 %	True Value	10 ppm
	CCV2	Recovery	101 %	True Value	10 ppm
	ICV	Recovery	100 %	True Value	5 ppm
	LCS	Recovery	88.2 %	Spike Amount	1 ppm
	LCSD	Recovery	87.2 %	Spike Amount	1 ppm
	LCS-RPD	Relative% Difference	1.07 %	<b>.</b>	
	MS	Recovery	80.8 %	Spike Amount	1 ppm
	MSD	Recovery	79.9 %	Spike Amount	1 ppm
	MS-RPD	Relative% Difference	1.03 %		
SPLP Mercury	Blank	Method Blank	0.002 ppm		
	CCV1	Recovery	98.6 %	True Value	0.005 ppm
	CCV2	Recovery	98.5 %	True Value	0.005 ppm



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Analyte	QC Paramete	r	Result Units	Reference Value		Unit
	LCS	Recovery	118 %	Spike Amount	0.01	ppm
	LCSD	Recovery	122 %	Spike Amount	0.01	ppm
	LCS-RPD	Relative% Difference	1.97 %			
	MS	Recovery	110 %	Spike Amount	0.01	ppm
	MSD	Recovery	105 %	Spike Amount	0.01	ppm
	MS-RPD	Relative% Difference	0.041 %	•		
SPLP Lead	Blank	Method Blank	< 0.0050 ppm			
	CCV1	Recovery	102 %	True Value	10	ppm
	CCV2	Recovery	99.8 %	True Value	10	ppm
	ICV	Recovery	100 %	True Value		ppm
	LCS	Recovery	86.4 %	Spike Amount		ppm
	LCSD	Recovery	81.2 %	Spike Amount		ppm
	LCS-RPD	Relative% Difference	6.2 %	•		
	MS	Recovery	77.5 %	Spike Amount	1	ppm
	MSD	Recovery	76.7 %	Spike Amount		ppm
	MS-RPD	Relative% Difference	0.987 %			
SPLP Selenium	Blank	Method Blank	< 0.050 ppm			
	CCV1	Recovery	102 %	True Value	10	ppm
	CCV2	Recovery	99.7 %	True Value		ppm
	ICV	Recovery	103 %	True Value		ppm
	LCS	Recovery	84.8 %	Spike Amount		ppm
	LCSD	Recovery	84.2 %	Spike Amount		ppm
	LCS-RPD	Relative% Difference	0.754 %			•
	MS	Recovery	80.4 %	Spike Amount	1	ppm
	MSD	Recovery	81.4 %	Spike Amount		ppm
	MS-RPD	Relative% Difference	1.26 %			
SPLP Zinc	Blank	Method Blank	< 0.25 ppm			
51 El Ellio	CCV1	Recovery	101 %	True Value	10	ppm
	CCV2	Recovery	98.9 %	True Value		ppm
	ICV	Recovery	99.7 %	True Value		ppm
	LCS	Recovery	84.8 %	Spike Amount		ppm
	LCSD	Recovery	81.9 %	Spike Amount		ppm
	LCS-RPD	Relative% Difference	3.47 %			• •
	MS	Recovery	77.6 %	Spike Amount	1	ppm
	MSD	Recovery	76.3 %	Spike Amount		ppm
	MS-RPD	Relative% Difference	1.62 %	•		
Fotal Solids	Blank%	Method Blank	< 0.10 %			
. 5.61 501140	Dup-A%	A Reading	93.2 %			
	Dup-B%	B Reading	93.1 %			
	Dup-RPD1	Relative% Difference	0.0847 %			

Approved by

Greg Oliver, Lab Manager

Project: FC2801-UT Page 6 of 7 Report: 140610N001-3



GCO Labs, LLC 3505 West Loop 281 Longview, Texas 75604 903 / 291-0137 www.gco-labs.com

Laboratory Approved by the Texas Railroad Commission

Report to:
J. B. Scott Wholly ass Detai Washington Company:
Scott Environmental Services Date: Lab Use Only ABO 40610 Now3 FIGMUS-C 140610 Nood Firmus-13 1406/olle 1 Firmus-A P.O. Box 6215 Longview Time: Relinquished by: State: Texas Field Identification Printed Name: 5 Zip o 1/9/1 Billing Address (if different). Matrix #Bottles Silia Stale Printed Name Received by: Linda Crass been franchised + 9 52th fright Sieved. Test Material has Notes Zip: Signifurge Calan Chbrides\*

3505 W. Loop 281 Longview, Texas 75604

Chain of Custody

greg.oliver@gca-labs.com (903)291-0137 (903)452-1929

visit us at www.gco-labs.com



### **Ute Tribal 13/14-9-4-3-2WH** FC2801-UT

Home Office - 1717 East Erwin Street

Tyler, Texas 75702-6398

(903) 595-4421 Lab: (903) 595-6402 Fax: (903) 595-6113

Area Offices

treet

Texarkana, AR 71854

(870) 772-0013 (903) 758-0402

BY:

Longview, TX 75604 707 West Cotton St. 2000 East Randol Mill Rd. STE 6Arlington, TX 76011

(817) 962-0048

Acct ID: SCOTTENV Report Date: 04/24/2014

Proj. No.: C6109-141

Date Sampled: 04/18/2014

Sampled By:

Client

Scott Environmental General File 2014, Longview, TX

By Order Of: Order Number:

Project: Location:

Material origin: Onsite, Sample location: FC 2801-UT (A)

Client:

Scott Environmental Services, Longview, TX

Contractor:

Not Given

REPORT:

**Modified Proctor** 

Material:

POBC-A

LAB NO:

S-12263

Test Method:

See Below

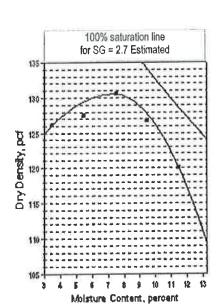
Blake Scott

**TEST RESULTS** 

Report No:

1-1700-000024

Page 1 of 1



% Moisture	e <u>Dry</u>	Density Lbs	./Cu.Ft <u>.</u>
3,5		126.1	
5.5		127.4	
7.4		130.5	
9.4		126.7	
11.5		120.0	
7.5	Optimum	130.5	Maximum

Color: Grayish Brown Description: PORC-A

Standard Method: A

Desc of Rammer: Mechanical

Preparation Method: Moist

Remarks: These tests were performed solely at the request of the Client for his own use. No warranties are expressed or implied regarding the suitability of the site for construction or whether or not the reported data represents all conditions of the site.

Test Method (As Applicable): ASTM D1557, Method-A

Charge: Scott Environmental Services, Longview, TX Attn: Blake Scott Orig: Scott Environmental Services, Longview, TX Attn: Blake Scott

Respectfully Submitted,

TL Engineers & Consultants, Inc.

Hermann Walka, P.E.

THIS REPORT APPLIES ONLY TO THE STANDARDS OR PROCEDURES INDICATED AND TO THE SAMPLE(S) TESTED AND/OR OBSERVED AND ARE NOT NECESSARILY INDICATIVE OF THE QUALITIES OF APPARENTLY IDENTICAL OR SIMILAR PRODUCTS OR PROCEDURES, NOR DO THEY REPRESENT AN ONGOING QUALITY ASSURANCE PROGRAM UNLESS SO NOTED. THESE REPORTS ARE FOR THE EXCLUSIVE USE OF THE ADDRESSED CLIENT AND ARE NOT TO BE REPRODUCED WITHOUT WRITTEN PERMISSION

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## ETTL Engineers & Consultants Inc.

GEOTECHNICAL \* MATERIALS \* ENVIRONMENTAL \* DRILLING \* LANDFILLS

Compressive Strength of Molded Soil-Cement Cylinders, ASTM D 1633 Method A Unconfined Compressive Strength of Compacted Soil-Lime Mixtures, ASTM D 5102 Procedure B

Project	lni	form	atlo	n
---------	-----	------	------	---

Project: SESI Job # FC 2801-UT (A)

Client/Arch./Engr.: Scott Environmental Services Inc: Longview, Texas

Contractor: Not Given

Job No.: C 6109-141

Sample Information

Location/Boring No: SESI Job # FC 2801-UT (A) Sample Date: 4/9/2014

Sample No.: 12263 Depth: \_\_\_\_\_f

Material Origin: On Site

Sampling Info, provided By: Client

Material Description: Grayish Brown POBC-A

Sampled By: SESI

Technician: Todd Sliger

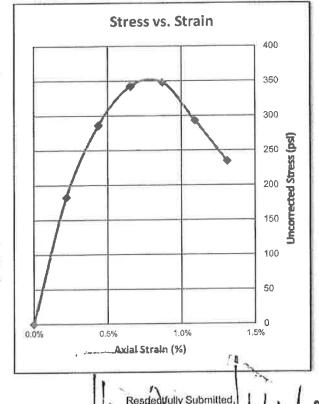
Test Date: 4/29/2014

**Test Data** 

Curing Method:

Sample moist cured at temperature of ~73 deg F for 7 days prior to conducting test.

	ASTM D 1557	Molding Method:
	7.5%	Optimum Molsture Content:
po	130.5	Maximum Density:
	7.4%	Molded Molsture Content:
po	130.5	Molded Density:
in	3.994	Diameter Before Curing:
ìn	4.591	Height Before Curing:
	1.149	H/D Ratio Before Curing:
In	4,019	Dlameter After Curing:
lin	4.593	Height After Curing:
	1.143	H/D Ratio After Curing:
ir	12.69	Area After Curing:
	0.904	H/D Correction Factor.
It	15.0	Seating Load:
11:	4450	Compression Load:
Ib	4465	Total Load:
p	0.0	Confining Pressure:
р	352.0	Maximum Stress:
р	314.5	Corrected Maximum Stress:
	0.9%	Peak Strain:
	Cylindrical	Fallure Type:
	r1	



Main Office:

1717 East Erwin Steet Tyler, Texas 75702

Longview Branch:

707 West Cotton Street Longview, Texas 75604-5505

Texarkana Branch: Arlington Branch: 210 Beech Street Texarkana, Arknsas 71854

2000 E. Randol Mill Rd. Suite 613 Arlington, Texas 76011

Phone 903-595-4421

Hermann Walka, P.E.

Fax: 903-595-6613

Phone 870-772-0013 Fax: 870-216-2413

Phone 903-758-0915 Fax: 903-758-8245

Phone817-962-0048

WWW.ETTTLINC.COM



# ETTL Engineers & Consultants Inc. GEOTECHNICAL \* MATERIALS \* ENVIRONMENTAL \* DRILLING \* LANDFILLS

### HYDRAULIC CONDUCTIVITY DETERMINATION FLEXIBLE WALL PERMEAMETER - CONSTANT VOLUME (Mercury Permometer Test)

Project:	SESI Job#	FC 2801-UT	(A) Scott	Environmenta	Services, L	ongview, Texa	ıs		
Date:	5/20/2014			Panel Number	:	1 ASTM D	5084		
roject No.:	C 6109-141	Per	mometer E	Data		1			
Boring No.:	FC 2801-UT	(A)	ap =	0.031416		Set Mercury to Pipet Rp at	Equilibrium	1.7	cm3
Sample:	12263		aa =	0.767120		beginning	Pipet Rp	6.7	cm3
epth (ft):			M1 =	0.030180		0.00042935		1.5	cm3
ther Location:			M2 =	1.040950	3 T=	0.20151195	3		
laterial Des	scription:	Grayish Bro	own POBC	A					
				SAMPL	E DATA				
			010.10	_					
	nple + ring or	tare:		_g		Before Test		After Test	
are or ring		-	0.0 619.10	_9		Tare No.:	12	Tare No.:	H5
Vet Wt: of S	•	in .	7.07	g cm2	-	Wet Wt.+tare:	577.20	Wet Wt.+tare	
iameter : ength :	<u> 2.78</u>	-''' - in	7.03	cm		Dry Wt. +tare:	546.10	Dry Wt +lare:	
engur. .rea:	6.08	in^2	39.24	cm2	-	Tare Wt:	152,50	Tare Wt:	163.30
olume :	16.84	in^3	275.96	cm3		Dry Wt.:	393.6	Dry Wt.:	565.6
Init Wt.(wet):	139.99	pcf	2,24	g/cm^3		Water Wt.:	31.1	Water Wt.:	63.9
Init Wt.(dry):	129.74	pcf	2.08	g/cm^3		% moist.:	7.9	% moist.	11.3
		- ' "		-					
Assumed S	Specific Gravily:			Density(pcf) =		OMC			
	/old ratio (e) =		% of	max Density =	= 99.4	+/- OMC	= 0,40		
Measwure	d % saturation:	98.00							
	Porosity (n)=	0.22		TEST DE	EADINGS				
1/Mercuni	Height Differe	nce @ f1)	5.2	cm		Gradient =	9.25		
. Hiviercury i	reign Dinere	1100 @ (1).	VIL		, 13 41-1-114				
Date	elapsed t	Z	$\Delta Z\pi$	temp	α	k	k		
	(seconds)	(pipet @ t)	(cm )	(deg C)	(temp corr)	(cm/sec)	(ft./day)	_ Reset = *	
5/9/2014	960	6.1	0,562485	25.1	0.887	4.77E-08	1.35E-04	¥	
5/9/2014	*******************	6	0.662485	25.1	0.887 0.887	4.55E-08	1,29E-04	***	
5/9/2014		5.9	0.762485	25.1	0.887	4.41E-08	1.25E-04	40)	
5/9/2014	********************	5.8	0.862485	25.1	0.887	4.33E-08	1.23E-04	No.	
				SUMI	MARY				
		ka =	4.52E-08	cm/sec		Acceptance of	criteria =	25	%
		ki			Vm	-			
		k1 =	4.77E-08	cm/sec	5.7	%	Vm =		x 100
		k2 =	4.55E-08	cm/sec	0.7	%		ka	
		k3 =	4.41E-08		2.3	%			
		k4 =	4.3 <b>3</b> E-08	cm/sec	4.1	%			
	Hydraulic co	nductivity	k≃	4.52E-08	cm/sec	1.28E-04	ft/day	1	
	Void Ratio	viiviiy	e =		ALL MARKET	1250mm # FESSENSE	Mark-cone.		
	Porosity		n =						
	D # D		*1 *	2.24	alam 3	440.0	ncf	1	

Hermann Walka, P.E.

140.0

( at 20 deg C)

at 20 deg C)

Phone: 903-595-4421 Fax: 903-595-6613 1717 East Erwin Steet Tyler, Texas 75702 Main Office: Phone: 903-758-0915 Fax: 903-758-8245 Longview Branch: 707 West Cotton Street Longview, Texas 75604-5505 Phone: 870-772-0013 Fax: 870-216-2413 Texarkana Branch: 210 Beech Street Texarkana, Arkosas 71854

2,24

0.16

4.63E-13

W=

kint =

**Bulk Density** 

Water Content

Intrinsic Permeability

g/cm3

cm2

cm3/cm3

Arlington Branch: 2000 E. Randol Mill Rd. Suite 613 Arlington, Texas 76011 Phone: 817-962-0048

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### **Ute Tribal 13/14-9-4-3-2WH** FC2801-UT

Home Office - 1717 East Erwin Street

Tyler, Texas 75702-6398

(903) 595-4421 Lab: (903) 595-6402 Fax: (903) 595-6113

Area Offices

\_\_\_\_\_treet BY: 707 West Cotton St. Texarkana, AR 71854 Longview, TX 75604

(870) 772-0013 (903) 758-0402

2000 East Randol Mill Rd. STE 6Arlington, TX 76011

(817) 962-0048

SCOTTENV Acct ID: Report Date: 04/24/2014

Proj. No.: C6109-141

Date Sampled: 04/18/2014

Sampled By:

Client

By Order Of:

Blake Scott

Location:

Scott Environmental General File 2014, Longview,TX Material origin: Onsite, Sample location: FC 2801-UT (B)

Order Number:

Client:

Project:

Scott Environmental Services, Longview, TX

Contractor:

Not Given

POBC-B

REPORT: Material:

**Modified Proctor** 

Test Method:

LAB NO:

S-12264

See Below

**TEST RESULTS** 

Report No:

1-1700-000025

Page 1 of 1

115				120					125		125			130			135	420		
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		- 14										L.			h ex s		 			
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				)	4	-4-	-4-	7					1	-7-	4		 			
_		- }	1	۲.	• •			-				4			-		 			

% Moisture	Dry	Density Lbs	./Cu.Ft.
3.7	-	127.7	
5.6		128.6	
7.5		130.0	
9.3		126.6	
11.4		120.2	
7.0	Optimum	130.0	Maximum

Color: Grayish Brown Description: POBC-B-

Standard Method: A

Desc of Rammer: Mechanical

Preparation Method: Moist

Remarks: These tests were performed solely at the request of the Client for his own use. No warranties are expressed or implied regarding the suitability of the site for construction or whether or not the reported data represents all conditions of the site.

Test Method (As Applicable): ASTM D1557, Method-A

Charge: Scott Environmental Services, Longview, TX Attn: Blake Scott Orig: Scott Environmental Services, Longview, TX Attn: Blake Scott

Respectfully Submitted,

ETTL Engineers & Consultants, Inc.

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REPORT CREATED BY ElmTree SYSTEM



## ETTL Engineers & Consultants Inc.

GEOTECHNICAL ★ MATERIALS ★ ENVIRONMENTAL ★ DRILLING ★ LANDFILLS

Compressive Strength of Molded Soil-Cement Cylinders, ASTM D 1633 Method A Unconfined Compressive Strength of Compacted Soil-Lime Mixtures, ASTM D 5102 Procedure B

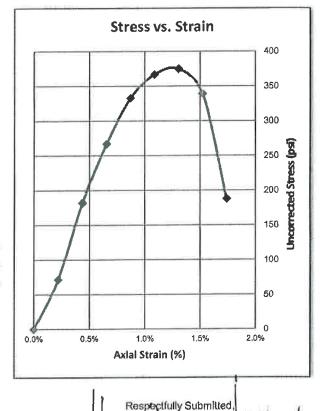
Project Information					
Project:	SESI Job # FC 2801-U	JT (B)			******
Client/Arch./Engr.:	Scott Enviromental Se	ervices Inc: Longv	iew, Texas		
	Not Given				
Job No.:	C 6109-141				
Sample Information	/ <del></del>				
Location/Boring No:	SESI Job # FC 2801-	UT (B)	Sample Date:	4/9/2014	
Sample No.:	12264	Depth:	ft.		
Material Origin:	On Site				
Sampling Info. provided By:	Client				
Material Description:	Grayish Brown POBC-B				
Sampled By:	SESI				
Technician:	Todd Sliger		Test Date:	4/29/2014	

**Test Data** 

Curing Method:

Sample moist cured at temperature of ~73 deg F for 7 days prior to conducting test.

	<b>ASTM D 1557</b>	Molding Method:
	7.0%	Optimum Moisture Content:
р	130	Maximum Density:
	7.5%	Molded Moisture Content:
P	130.0	Molded Density:
ìr	3.994	Diameter Before Curing:
ir	4.591	Height Before Curing:
	1.149	H/D Ratio Before Curing:
ir	4.03	Diameter After Curing:
ir	4.604	Height After Curing:
	1.142	H/D Ratio After Curing:
ir	12.76	Area After Curing:
	0.904	H/D Correction Factor.
- It	15.0	Seating Load:
It	4842	Compression Load:
It	4857	Total Load:
p	0.0	Confining Pressure:
р	380.8	Maxlmum Stress:
Р	338.7	Corrected Maximum Stress:
1	1.3%	Peak Strain:
	Cylindrical	Failure Type:



Main Office:

1717 East Erwin Steet Tyler, Texas 75702

Longview Branch:

707 West Cotton Street Longview, Texas 75604-5505

Texarkana Branch:

210 Beech Street Texarkana, Arkosas 71854

Arlington Branch:

2000 E. Randol Mill Rd. Suite 613 Arlington, Texas 76011

Phone: 903-595-4421

Fax: 903-595-6613

Phone: 903-758-0915

Fax: 903-758-8245 Phone 870-772-0013 Fax: 870-216-2413

Phone:817-962-0048

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### ETTL Engineers & Consultants Inc.

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### HYDRAULIC CONDUCTIVITY DETERMINATION FLEXIBLE WALL PERMEAMETER - CONSTANT VOLUME (Mercury Permometer Test)

			(M	ercury Per	mometer	lest)			
Project :	SESI Job#	FC 2801-UT	(B) Scott	Environmenta	Services, L	ongview, Texas	3		
Date:	5/27/2014			anel Number		2 ASTM D 5	084		
Project No. :	C 6109-141	Per	mometer D	ata					
Boring No.:	FC 2801-UT	(13)	ap =	0.031416	3 cm2	Set Marcury to Pipet Rp at	Equilibrium	1.8	cm3
Sample:	12264	757	aa =	0.767120		beginning	Pipet Rp	6.7	cm3
Depth (ft):	12003		M1 =	0.030180		0.000436536	Annulus Ra	1.6	cm3
Other Location:	On Site		M2 =	1.04095		0.205799442			o corress
Material Des		Gravish Bro					SHIDE COMMENT		
Waterial Des	ionphon.	City on Di	Zilli I Giba						
				SAMPL	E DATA				
	nple + ring or t	are:	617,80	_9		Defens Tank		After Test	
Tare or ring			0.0	_9		Before Test	00		C1
Wet Wt; of S	,		617.80	9		Tare No.:	C2	Tare No.:	765.30
Diameler :	2.77	in .	7.04	cm2		Wet Wt.+laro:	571.60	Wet Wt.+tere	
Length:	2.79	ln ,	7.09	cm	-	Dry Wt.+tare:	541.60	Dry WL+tare:	703.40
Area:	6.03	ín^2	38.92	cm2		Tare Wt:	143.20	Tare Wt:	133.50
Volume:	16.84	ln^3	276.01	cm3		Dry Wt.:	398.4	_Dry Wt.:	569.9
Unit Wt (wet):		pcf	2.24	g/cm^3		Water Wt.:	30	Water Wt.:	61.9
Unit Wt.(dry):	129.89	pcf _	2.08	_g/cm^3		% moist.:	7.5	% moist:	10.9
		0.05	M D D		420	OMC =	. 7		
	specific Gravity:			ensity(pcf) =	130	-		-	
	/oid ratio (e) =	0.27	% OI	max Density =	99,9	_ +/- OMC ==	0.55	-	
Measure	d % saturation:	98.00							
	Porosity (n)=	0.21		TEST DE	ADINOS				
77.77	()	O W	F 4		ADINGS	Cradiant -	8.99		
Z1(Mercury	Height Differer	nce @ (1):	5.1	cm	Hydraulic	Gradient =	0.88		
Dete	-1	7	ΔΖπ	temp	α	k	k		
Date	elapsed t	Z		USE DANEED		NY	(fL/day)	Reset = *	
E 10 10 0 4 4	(seconds)	(pipet @ t)	(cm )	(deg C)	(temp corr) 0.887	2.82E-08	7.99E-05	110000	
5/9/2014	*************************	6.1 6	0.5591	25.1 25.1	0.887	2.61E-08	7.41E-05		
5/9/2014			0.6591			2.49E-08	7.06E-05	28	
5/9/2014		5.9	0.7591	25.1 25.1	0.887	2.37E-08	6.72E-05	60	
5/9/2014	3180	5.8	0.8591	25.1	0.007	Z.37 E-00	0.725-03	Η),	
				SUMM	MARY				
		ka =	2.57E-08			Acceptance of	riteria =	25	%
		ki			٧m	•			
		k1 =	2.82E-08	cm/sec	9.5	%	Vm ≕	ka-ki	x 100
		k2 =	2.61E-08		1.6	%		ka	
		k3 =	2.49E-08		3.2	%			
		k4 =	2.37E-08		7.9	%			
	Hydraulic cor	nductivity	k =	25.000.000.000.000	cm/sec	7,29E-05	ft/day		
	Void Ratio		θ =						
	Porosity		n =	0.21					
	Bulk Density		γ =	2.24	g/cm3	139.7	pcf		
	Water Conte	nt	W =		cm3/cm3	( at 20 deg C			
	Intrinsic Pern		kint =	2.64E-13	cm2	( at 20 deg C)		13.	
						1	9/00/s.2 (compl)	1.00	,
					1	Respectfully Sal	omitted	111	1 -
						$[P_1 = A]$	1.1	IAII	A -1
					р.	HULLIAN I	LANAL	V A IV	$\Lambda \wedge \Gamma$

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Texarkana Branch: 210 Beech Street Texarkana, Arknsas 71854

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Phone: 903-758-0915 Fax: 903-758-8245 Phone: 870-772-0013 Fax: 870-216-2413

Phone: 903-595-4421 Fax: 903-595-6613

Arlington Branch: 2000 E. Randol Mill Rd. Suite 613 Arlington, Texas 76011 Phone:817-962-0048

### **Ute Tribal 13/14-9-4-3-2WH** FC2801-UT

Home Office - 1717 East Erwin Street

Tyler, Texas 75702-6398

(903) 595-4421 Lab: (903) 595-6402 Fax: (903) 595-6113

Area Offices

(870) 772-0013 Texarkana, AR 71854 \_\_\_\_treet (903) 758-0402 Longview, TX 75604 707 West Cotton St. 2000 East Randol Mill Rd. STE 6ArlIngton, TX 76011 (817) 962-0048

SCOTTENV Acct ID: Report Date: 04/24/2014

Proj. No.: C6109-141

Date Sampled: 04/18/2014

Client Sampled By:

Scott Environmental General File 2014, Longview,TX

By Order Of: Blake Scott

Project: Location:

Material origin: Onsite, Sample location: FC 2801-UT (C)

Order Number:

Client:

Scott Environmental Services, Longview, TX

Contractor:

Material:

Not Given

REPORT:

**Modified Proctor** 

S-12265 LAB NO: Test Method:

See Below

POBC-C

TEST RESULTS

1-1700-000026 Report No:

Page 1 of 1

135	115						<i>Y</i> .
130	125				7	/	<u>:</u>
	135		- '	/	/	\	

% Moisture	Dry	Density Lbs	./Cu.Ft.	
3.6		127.0		
5.5		128.0		
7.7		131.0		
9.5		126.1		
11.9		119.8		
7.5	Optimum	131.0	Maximum	

Color: Gravish Brown Description: POBC-C

Standard Method: A

Desc of Rammer: Mechanical Preparation Method: Moist

Remarks: These tests were performed solely at the request of the Client for his own use. No warranties are expressed or implied regarding the suitability of the site for construction or whether or not the reported data represents all

conditions of the site.

Test Method (As Applicable): ASTM D1557, Method-A

Charge: Scott Environmental Services, Longview, TX Attn: Blake Scott Orig: Scott Environmental Services, Longview, TX Attn; Blake Scott

Respectfully Submitted,

TL Engineers & Consultants, Inc.

THIS REPORT APPLIES ONLY TO THE STANDARDS OR PROCEDURES INDICATED AND TO THE SAMPLE(S) TESTED AND/OR OBSERVED AND ARE NOT NECESSARILY INDICATIVE OF THE QUALITIES OF APPARENTLY IDENTICAL OR SIMILAR PRODUCTS OR PROCEDURES, NOR DO THEY REPRESENT AN ONGOING QUALITY ASSURANCE PROGRAM UNLESS SO NOTED. THESE REPORTS ARE FOR THE EXCLUSIVE USE OF THE ADDRESSED CLIENT AND ARE NOT TO BE REPRODUCED WITHOUT WRITTEN PERMISSION

REPORT CREATED BY EIMTree SYSTEM



## ETTL Engineers & Consultants Inc.

GEOTECHNICAL \* MATERIALS \* ENVIRONMENTAL \* DRILLING \* LANDFILLS

Compressive Strength of Molded Soil-Cement Cylinders, ASTM D 1633 Method A Unconfined Compressive Strength of Compacted Soil-Lime Mixtures, ASTM D 5102 Procedure B

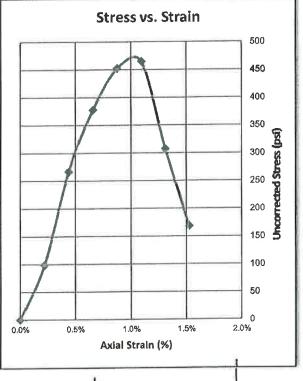
Project Information					
	SESI Job # FC 2801-				
Client/Arch./Engr.:	Scott Environmental S	ervices Inc: Longv	iew, Texas		
Contractor:	Not Given				
Job No.:	C 6109-141				
Sample Information					
Location/Boring No:	SESI Job # FC 2801	-UT (C)	Sample Date:	4/9/2014	
Sample No.:	12265	Depth:	ft.		
Material Origin:	On Site				
Sampling Info. provided By:	Client				
Material Description:	Grayish Brown POBC-0	2_			
Sampled By:	SESI				
Technician:	Todd Sliger		Test Date:	4/29/2014	_

**Test Data** 

Curing Method:

Sample moist cured at temperature of ~73 deg F for 7 days prior to conducting test.

1	<b>ASTM D 1557</b>	Molding Method:
	7.5%	Optimum Moisture Content:
Р	131	Maximum Density:
	7.7%	Molded Moisture Content:
р	131.0	Molded Density:
ir	3.994	Diameter Before Curing:
ir	4.591	Height Before Curing:
	1.149	H/D Ratio Before Curing:
ir	4.024	Diameter After Curing:
ir	4.592	Height After Curing:
	1.141	H/D Ratio After Curing:
ir	12.72	Area After Curing:
	0.904	H/D Correction Factor.
IŁ	15.0	Seating Load:
118	5971	Compression Load:
lk:	5986	Total Load:
р	0.0	Confining Pressure:
р	470.7	Maximum Stress:
р	419.7	Corrected Maximum Stress:
	1.1%	Peak Strain:
	Cylindrical	Fallure Type:
	15	



Respectfolly Submitted,
Hermann Walka, P.E.

Wal:

Main Office:

1717 East Erwin Steet Tyler, Texas 75702

Longview Branch:

707 West Cotton Street Longview, Texas 75604-5505

Texarkana Branch:
Arlington Branch:

210 Beech Street Texarkana, Arknsas 71854

2000 E. Randol Mill Rd. Suite 613 Arlington, Texas 76011

Phone 903-595-4421

Fax: 903-595-6613 Fax: 903-758-8245

Phone 903-758-0915

Phone 870-772-0013 Fax: 870-216-2413

Phone 817-962-0048

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# ETTL Engineers & Consultants Inc. geotechnical \* materials \* environmental \* drilling \* landfills

### HYDRAULIC CONDUCTIVITY DETERMINATION FLEXIBLE WALL PERMEAMETER - CONSTANT VOLUME

(Mercury Permometer Test)

Project:	SESI Job#1	FC 2801-UT	(C) Scott I	Environmenta	Services, L	ongview, Texas	3			
Date:	5/27/2014		P	and Number		3 ASTM D 5	084			
Project No. :	C 6109-141	Per	mometer D	ata		1 6. 9-				
Boring No.:	FC 2801-UT	(C)	ap =	0.031416	cm2	Set Mercury to Pipot Rp at	Equilibriu		1.7	cm3
Sample:	12265		aa =	0.767120		beginning	Pipet Rp		6.7	cm3
Depth (ft):			M1 =	0.030180				la .	1.5	cm3
Other Location:	On Site		M2 =	1.040953	T =	0.201511953				
Naterial Des	scription:	Grayish Bro	own POBC-	<u>C</u> s						
				SAMPI	E DATA					
				OUIAIL F	LUMM					
Net Wt. san	nple + ring or t	are:	627.40	g						
Tare or ring	Wt.:		0.0	g		Before Test			After Test	400
Wet Wt: of S	Sample :	_	627.40	g		Tare No.:	3K		Tare No.:	A30
Dlameter :	2.77	ìn	7.05	cm2		Wel Wt +tare:	574.		Wet Wt.+tare	781.00
englh :	2.81	ìn 🚋	7.13	cm		Dry WI.+lare:	544.		Dry Wt.+tare:	
Area:	6.04	in^2	38.98	cm2		Tare Wt:	153.		Tare Wt:	142.70
Volume :	16.97	in^3		cm3		Dry Wt.:	391		Dry Wt.:	578.3
Jnit Wt.(wet):		pcf	2.26	g/cm^3		Waler Wt.:	30.		Water Wt.:	60 10.4
Unit Wt.(dry):	130.76	pcf _	2.10	g/cm^3		% malst.:	7.7		% moist.:	10.4
Assumed 5	Specific Gravity:	2.65	Max Drv D	ensity(pcf) =	131	OMC =	7.5	5		
	Vold ratio (e) =	$\overline{-}$		max Density =		- +/- OMC =	0.2	0		
	d % saturation:	99.00	,			_				
MODGGIO	Porosity (n)=									
	, 0.00%, ()			TEST RE	ADINGS					
Z1(Mercury	Height Differer	nce @ (1):	5.2	cm		Gradient =	9.13			
	11111111111111111111111111111111111111	- 38 6 8					1.			
Date	elapsed t	Z	$\Delta Z\pi$	temp	α	k	k	25.4	Reset ≃ *	
		(pipel @ l)	(cm)	(deg C)	(temp corr)		(ft./da		Keser -	
5/9/2014		6.1	0.562485	<b>25</b> 25	0.889 0.889 0.889	2.79E-08	7.91E			
5/9/2014	ARREST STATE OF THE PARTY OF TH	6	0.662485	25	0.889	2.45E-08	6.94E			
5/9/2014	******************	5.9	0.762485	25	0.889	2.21E-08	6.27E 5.86E			
5/9/2014	3600	5.8	0.862485	25	0.889	2.07E-08	J.60E			
				SUMI	MARY					
		ka =	2.38E-08	cm/sec	\ /	Acceptance ci	riterla =		25	%
		kì	0.705.00		Vm 47.3	0/		Vm =	ka-ki	x 100
		k1 =	2.79E-08		17.3	%		A10 -	ka ka	~ 100
		k2 =	2.45E-08		2.9 7.1	% %			V.C	
		k3 =	2,21E-08							
		k4 =	2.07E-08	cm/sec	13.1	%				
	Hydraulic cor	nductivity	k =	2.38E-08	cm/sec	6.74E-05	ft/day			
	Void Ratio	- 1	e ≃	0.27						
	Porosity		n =	0.21						
	Bulk Density		γ =	2.26	g/cm3	140.8	paf			
	Water Conte	nt	W =	0.16	cm3/cm3	( at 20 deg C			2	
	Intrinsic Pern	neability	kint =	2.44E-13	cm2	( at 20 deg C	)			
						espectfully syl	bmitted			757
						Telbestimit su	1		1 1 1	- 1
						12: 1	11	4	1 4	NA.
						TIOUN!	MAN	1	VV	M/l.
						12.000	W-0	4		
						Hermann Wal	ка, Р.Е.			

Main Office: 1717 East Erwin Steet Tyler, Texas 75702

Phone: 903-595-4421 Fax: 903-595-6613

Longview Branch: 707 West Cotton Street Longview, Texas 75604-5505

Phone: 903-758-0915 Fax: 903-758-8245

Texarkana Branch: 210 Beech Street Texarkana, Arknsas 71854 Arlington Branch: 2000 E. Randol Mill Rd. Suite 613 Arlington, Texas 76011 Phone:817-962-0048

Phone: 870-772-0013 Fax: 870-216-2413

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# Ute Tribal 4-1-12-3-4WH S2696-UT



GCO Labs, LLC 3505 West Loop 281 Longview, Texas 75604 903 / 291-0137 www.gco-labs.com

**Customer:** 

J. Blake Scott

Scott Environmental Services, Inc.

P.O. Box 6215

Longview, Texas 75608

USA

Project: **S2696-UT** Cust. Sample: **POBC-A** 

Collected; 9/17/2013

Received: 10/3/2013

Lab ID: 131003P001

Report Date: 10/18/2013

Analysis	Results	Units	Method	Date	Time	Tech
Dry Sample (pH,EC and CEC)	Completed	Result	LA 29B	10/3/2013	17:00	fgo -
EC at Saturation	44.8	mho/cm	LA 29B	10/14/2013	14:17	fgo
Electrical Conductance at 25 C	14.5	mho/cm	LA 29B	10/9/2013	9:05	fgo
Hydrophobicity	Positive	Result	LA 29B	10/4/2013	8:00	fgo
pH 1:1 aque(LA29B) @25C	10.1	SU	LA 29B	10/8/2013	11:00	fgo
Sample Prep La - 29B	Completed	mL/g	LA 29B	10/9/2013	9:51	fgo
Saturation Water Percentage (dried s	32	%	LA 29B	10/7/2013	16:10	fgo
Sodium Adsorption Ratio	3.5	meq/meq	LA 29B	10/10/2013	10:54	fgo
Soluble Cation Extraction	80/80.0	mL/g	LA 29B	10/7/2013	14:43	fgo
Special Total Ba Metals Prep	500/0.1077	mL/g	LA 29B	10/9/2013	9:51	fgo
Extraction (3-Day SESI)	50/5.59	m∐g	LA29B*Modified	10/4/2013	17:00	fgo
Chloride (LA29 3D EXIC)	3,260	mg/kg	LA29B-Mod SESI	10/8/2013	14:07	fgo
Free Alkalinity (Phenyl	14,900	mg/kg	SM 2320B	10/9/2013	11:30	fgo
Total Solids for Dry Wt	91.3	%	SM 2540 G	10/4/2013	8:15	fgo
Solid/Organic Metals Digestion	100/1.40	mL/g	SW-846 3050B	10/8/2013	9:00	fgo
Arsenic	6.86	mg/kg	SW-846 6010B	10/10/2013	10:54	fgo
Cadmium	< 2.50	mg/kg	SW-846 6010B	10/10/2013	10:54	fgo
Calcium (Water Soluble)	140	meq/L	SW-846 6010B	10/10/2013	10:54	fgo
Chromium	16.8	mg/kg	SW-846 6010B	10/10/2013	10:54	fgo
Lead	3.91	mg/kg	SW-846 6010B	10/10/2013	10:54	fgo
Magnesium (Water Soluble)	< 1.00	meq/L	SW-846 6010B	10/10/2013	10:54	fgo
Selenium	< 2.50	mg/kg	SW-846 6010B	10/10/2013	10:54	fgo
Silver	< 2.50	mg/kg	SW-846 6010B	10/10/2013	10:54	fgo
Sodium (Water Soluble)	29.4	meq/L	SW-846 6010B	10/10/2013	10:54	fgo
True Total Barium	194,000	mg/kg	SW-846 6010B	10/10/2013	10:54	fgo
Zinc	31.5	mg/kg	SW-846 6010B	10/10/2013	10:54	fgo
Mercury	0.217	mg/kg	SW-846 7471A	10/10/2013	14:31	fgo
Solid Metal Digestion Hg	100/0.55	mL/g	SW-846 7471A	10/7/2013	10:30	fgo
Benzene	< 0.103	mg/kg	SW-846 8260B	10/9/2013	18:46	fgo
VOC 5035 Extraction	10/10.6	mg/kg	SW-846 8260B	10/3/2013	16:40	fgo
Sulfate	7,510	mg/kg	Tex-620-J	10/4/2013	12:42	fgo
Sulfate Extraction/Leaching	50/5.37	mL/g	Tex-620-J	10/2/2013	12:00	fgo
1005 TPH Extraction Solid	10/10.9	m∐g	TNRCC TX 1005	10/9/2013	15:20	fgo
C12 to C28 TPH	96,600	mg/kg	TNRCC TX 1005	10/10/2013	11:44	fgo
C28 to C36 TPH	< 500	mg/kg	TNRCC TX 1005	10/10/2013	11:44	fgo
C6 to C12 TPH	5,310	mg/kg	TNRCC TX 1005	10/10/2013	11:44	fgo
C6 to C36 TPH	102,000	mg/kg	TNRCC TX 1005	10/10/2013	11:44	fgo
C0 (0 C30 1Pfi	102,000	mg/kg	TNRCC 1A 1005	10/10/2013	11.44	iyo

Project: S2696-UT Page 1 of 7 Report: 131003P001-2



GCO Labs, LLC 3505 West Loop 281 Longview, Texas 75604 903 / 291-0137 www.gco-labs.com

Project: **S2696-UT**Cust. Sample: **WOBC-A**Lab ID: 131003P002

Collected; 9/17/2013

Received: 10/3/2013

Report Date: 10/18/2013

Lab ID. 13 1003P00	_		Report Date. 10/1	0/2010		
Analysis	Results	Units	Method	Date	Time	Tech
Dry Sample (pH,EC and CEC)	Completed	Result	LA 29B	10/3/2013	17:00	fgo
EC at Saturation	62.3	mho/cm	LA 29B	10/14/2013	14:17	fgo
Electrical Conductance at 25 C	17.5	mho/cm	LA 29B	10/9/2013	9:05	fgo
Hydrophobicity	Positive	Result	LA 29B	10/4/2013	8:00	fgo
pH 1:1 aque(LA29B) @25C	10.8	SU	LA 29B	10/8/2013	11:00	fgo
Sample Prep La - 29B	Completed	mL/g	LA 29B	10/9/2013	9:51	fgo
Saturation Water Percentage (dried s	28	%	LA 29B	10/7/2013	16:10	fgo
Sodium Adsorption Ratio	2.7	meg/meg	LA 29B	10/10/2013	10:54	fgo
Soluble Cation Extraction	80/80.0	mL/g	LA 29B	10/7/2013	14:43	fgo
Special Total Ba Metals Prep	500/0.1319	mL/g	LA 29B	10/9/2013	9:51	fgo
Extraction (3-Day SESI)	50/6.89	m∟g mL/g	LA29B*Modified	10/4/2013	17:00	fgo
Chloride (LA29 3D EXIC)	2,980	mg/kg	LA29B-Mod SESI	10/8/2013	14:48	fgo
Free Alkalinity (Phenyl	1,990	mg/kg	SM 2320B	10/9/2013	11:30	fgo
Total Solids for Dry Wt	89.0	%	SM 2540 G	10/4/2013	8:15	fgo
Solid/Organic Metals Digestion	100/1.36	mL/g	SW-846 3050B	10/8/2013	9:00	fgo
Arsenic	4.81	mg/kg	SW-846 6010B	10/10/2013	10:54	fgo
Cadmium	< 2.50	mg/kg	SW-846 6010B	10/10/2013	10:54	fgo
Calcium (Water Soluble)	174	meq/L	SW-846 6010B	10/10/2013	10:54	fgo
Chromium	7.05	mg/kg	SW-846 6010B	10/10/2013	10:54	fgo
ead	< 2.50	mg/kg	SW-846 6010B	10/10/2013	10:54	fgo
//Agnesium (Water Soluble)	< 1.00	meq/L	SW-846 6010B	10/10/2013	10:54	fgo
Selenium	< 2.50	mg/kg	SW-846 6010B	10/10/2013	10:54	fgo
Silver	< 2.50	mg/kg	SW-846 6010B	10/10/2013	10:54	fgo
Sodium (Water Soluble)	24.8	meq/L	SW-846 6010B	10/10/2013	10:54	fgo
rue Total Barium	293,000	mg/kg	SW-846 6010B	10/10/2013	10:54	fgo
Zinc	22.2		SW-846 6010B	10/10/2013	10:54	fgo
Mercury	0.107	mg/kg	SW-846 7471A	10/10/2013	14:31	fgo
Solid Metal Digestion Hg	100/0.54	mL/g	SW-846 7471A	10/7/2013	10:30	fgo
Benzene	< 0.231	mg/kg	SW-846 8260B	10/9/2013	19:12	fgo
OC 5035 Extraction	10/10.4	mg/kg	SW-846 8260B	10/3/2013	16:40	fgo
Gulfate	402	mg/kg	Tex-620-J	10/4/2013	12:55	fgo
Sulfate Extraction/Leaching	50/5.73	mL/g	Tex-620-J	10/2/2013	12:00	fgo
005 TPH Extraction Solid	10/11.0	mL/g	TNRCC TX 1005	10/9/2013	15:20	fgo
C12 to C28 TPH	135,000	mg/kg	TNRCC TX 1005	10/10/2013	12:42	fgo
C28 to C36 TPH	< 500	mg/kg	TNRCC TX 1005	10/10/2013	12:42	fgo
C6 to C12 TPH	8,950	mg/kg	TNRCC TX 1005	10/10/2013	12:42	fgo
C6 to C36 TPH	144,000	mg/kg	TNRCC TX 1005	10/10/2013	12:42	fgo



GCO Labs, LLC 3505 West Loop 281 Longview, Texas 75604 903 / 291-0137 www.gco-labs.com

### **Quality Control Data**

Analyte	QC Paramete	r	Result Units	Reference Value	Units
Chloride	Blank	Method Blank	< 1.0 ppm		
	CCV1	Recovery	107 %	True Value	20 ppm
	CCV2	Recovery	99.8 %	True Value	10 ppm
	CCV3	Recovery	101 %	True Value	10 ppm
	Dup-A	A Reading	3,260 ppm		
	Dup-B	B Reading	3,670 ppm		
	Dup-RPD1	Relative% Difference	11.9 %		
	LCS	Recovery	90.4 %	Spike Amount	9000 ppm
	LCSD	Recovery	89.9 %	Spike Amount	9000 ppm
	LCS-RPD	Relative% Difference	0.565 %		
	MS	Recovery	100 %	Spike Amount	8 ppm
C6-C12 TPH	Blank	Method Blank	< 50 ppm		
	CCV1	Recovery	92.3 %	True Value	1000 ppm
	CCV2	Recovery	105 %	True Value	1000 ppm
	Dup-A	A Reading	5,310 ppm		
	Dup-B	B Reading	7,510 ppm		
	Dup-RPD1	Relative% Difference	34.3 H %		
	LCS	Recovery	86.4 %	Spike Amount	500 ppm
	LCSD	Recovery	100 %	Spike Amount	500 ppm
	LCS-RPD	Relative% Difference	14.9 %		
C12-C28 TPH	Blank	Method Blank	< 50 ppm		
	CCV1	Recovery	96.6 %	True Value	1000 ppm
	CCV2	Recovery	109 %	True Value	1000 ppm
	Dup-A	A Reading	96,600 ppm		
	Dup-B	B Reading	95,600 ppm		
	Dup-RPD1	Relative% Difference	0.953 %		
	LCS	Recovery	105 %	Spike Amount	500 ppm
	LCSD	Recovery	112 %	Spike Amount	500 ppm
	LCS-RPD	Relative% Difference	6.75 %		
Benzene	Blank	Method Blank	< 0.0010 ppm		
	CCV1	Recovery	106 %	True Value	0.02 ppm
	LCS	Recovery	112 %	Spike Amount	0.02 ppm
	LCSD	Recovery	116 %	Spike Amount	0.02 ppm
	LCS-RPD	Relative% Difference	3.38 %		
	MS	Recovery	105 %	Spike Amount	0.02 ppm
	MSD	Recovery	108 %	Spike Amount	0.02 ppm
	MS-RPD	Relative% Difference	3.28 %	-	• •

Project: S2696-UT Page 3 of 7 Report: 131003P001-2



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Analyte	QC Parameter		Result Units	Reference Value		Units
Alkalinity	Dup-A	A Reading	9,960 ppm			
	Dup-B	B Reading	9,950 ppm			
	Dup-RPD1	Relative% Difference	0.11 %			
Electrical Conductivity	Dup-A(EC)	Reading	15.12 mho/c			
	Dup-B(EC)	Reading	15.01 mho/c			
	Dup-RPD1	Relative% Difference	0.73 %			
	Standard1(EC)	Reading	14.77 mho/c	True Value	14.13	mho/c
	Standard2(EC)	Reading	14.78 mho/c	True Value	14.13	mho/c
SWP	Blank%	Method Blank	< 0.10 %			
	Dup-A%	A Reading	38.4 %			
	Dup-B%	B Reading	40 %			
	Dup-RPD1	Relative% Difference	4.14 %			
pH at 25C	Dup-A(pH)	Reading	10.66 SU			
	Dup-B(pH)	Reading	10.56 SU			
	Dup-RPD1	Relative% Difference	0.943 %			
	pH 10 Buffer(1st)		10 SU	True Value	10.01	SU
	pH 10 Buffer(2nd)	=	9.98 SU	True Value	10.01	SU
Sulfate	Blank	Method Blank	< 0.10 ppm			
	CCV1	Recovery	105 %	True Value	20	ppm
	CCV2	Recovery	104 %	True Value		ppm
	Dup-A	A Reading	3,690 ppm	1100 10100		P. P
	Dup-B	B Reading	3,530 ppm			
	Dup-RPD1	Relative% Difference	4.54 %			
	LCS	Recovery	97.8 %	Spike Amount	5000	ppm
	LCSD	Recovery	91.1 %	Spike Amount		ppm
	LCS-RPD	Relative% Difference	7.11 %	opino / illiouni	0000	pp
	MS	Recovery	111 %	Spike Amount	8	ppm
Barium, True Total	Blank	Method Blank	< 0.0050 ppm	opino / intodric	·	ppiii
	CCV2	Recovery	101 %	True Value	10	ppm
	CCV3	Recovery	99.9 %	True Value		ppm
	Dup-A	A Reading	122,000 ppm	Truc Value	10	ppiii
	Dup-B	B Reading	122,000 ppm			
	Dup-RPD1	Relative% Difference	0.331 %			
	ICV		96.4 %	True Value	5	ppm
Mercury	Blank	Recovery Method Blank	< 0.00020 ppm	THE VAILE	3	Phili
·	CCV1	Recovery	105 %	True Value	0.005	nnm
	CCV2	Recovery	101 %	True Value	0.005	
	LCS	Recovery	106 %	Spike Amount	0.005	
	LCSD	Recovery	100 %	Spike Amount	0.005	
	LCSD LCS-RPD	Relative% Difference	5.48 %	Opine Amount	0.000	Phili
	MS		103 %	Spike Amount	በ በበፍ	nnm
	MSD	Recovery	103 %	Spike Amount	0.005 0.005	
	MS-RPD	Recovery	0.162 %	Opine Amount	0.005	Phili
		Relative% Difference Method Blank				
Arsenic	Blank		< 2.5 ppm	True Value	10	DDP*
	CCV1	Recovery	99.7 %	True Value		ppm
	CCV2	Recovery	99.4 %	True Value		ppm
	ICV	Recovery	98.9 %	True Value		ppm
	LCS	Recovery	98.7 %	Spike Amount		ppm
	LCSD	Recovery	93.4 %	Spike Amount	0.1	ppm

Project: S2696-UT Page 4 of 7 Report: 131003P001-2



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		Result Units	Reference Value	Units
LCS-RPD	Relative% Difference	5.53 %		
MS	Recovery	74.1 %	Spike Amount	0.5 ppm
MSD	Recovery	78.5 %	Spike Amount	0.5 ppm
MS-RPD	Relative% Difference	5.86 %		
Blank	Method Blank	< 0.0050 ppm		
CCV1	Recovery	101 %	True Value	100 ppm
CCV2	Recovery	99.1 %	True Value	100 ppm
Dup-A	A Reading	2,070 ppm		
Dup-B	B Reading	2,050 ppm		
Dup-RPD1	Relative% Difference	0.957 %		
ICV	Recovery	99.1 %	True Value	50 ppm
Blank	Method Blank	< 2.5 ppm		
CCV1	Recovery	99.4 %	True Value	5 ppm
CCV2	Recovery	99 %	True Value	5 ppm
ICV	Recovery	98.4 %	True Value	2.5 ppm
LCS	Recovery	122 %	Spike Amount	0.04 ppm
LCSD	Recovery	117 %	Spike Amount	0.04 ppm
LCS-RPD	Relative% Difference	3.73 %		
MS	Recovery	79.1 %	Spike Amount	0.25 ppm
MSD	Recovery	79.9 %	Spike Amount	0.25 ppm
MS-RPD	Relative% Difference	1.05 %		
Blank	Method Blank	< 2.5 ppm		
CCV1	Recovery	99.2 %	True Value	10 ppm
CCV2	·	98.2 %	True Value	10 ppm
			True Value	5 ppm
			Spike Amount	0.1 ppm
	· ·		•	0.1 ppm
	•			
			Spike Amount	0.5 ppm
	•		•	0.5 ppm
	•			
			True Value	10 ppm
	•			10 ppm
	•			5 ppm
				0.1 ppm
			·	0.1 ppm
	•		Opino / intodin	51. pp
			Snike Amount	0.5 ppm
	·			0.5 ppm
	•		Opine Amount	о.о ррин
		* *	True Value	100 ppm
	-			
	-		THE VAINE	100 ppm
	•			
Dup-B Dup-RPD1	B Reading Relative% Difference	< 0.500 ppm < 1.00 %		
	PAISTIVAY, I littaranca	< 1.00 %		
	MS MSD MS-RPD Blank CCV1 CCV2 Dup-A Dup-B Dup-RPD1 ICV Blank CCV1 CCV2 ICV LCS LCSD LCS-RPD MS MSD MS-RPD Blank CCV1 CCV2 ICV LCS LCSD LCS-RPD MS MSD MS-RPD Blank CCV1 CCV2 ICV LCS LCSD LCS-RPD MS MSD MS-RPD Blank CCV1 CCV2 ICV LCS LCSD LCS-RPD MS MSD MS-RPD Blank CCV1 CCV2 ICV LCS LCSD LCS-RPD MS MSD MS-RPD Blank CCV1 CCV2 ICV LCS CCV1 CCV2 ICV LCS LCSD LCS-RPD MS MSD MS-RPD Blank CCV1 CCV2 ICV LCS LCSD LCS-RPD MS MSD MS-RPD Blank CCV1 CCV2 ICV LCS LCSD LCS-RPD MS MSD MS-RPD Blank CCV1 CCV2 ICV LCS LCSD LCS-RPD MS MSD MS-RPD Blank CCV1 CCV2 ICV LCS LCSD LCS-RPD MS MSD MS-RPD Blank CCV1 CCV2 ICV LCS LCSD LCS-RPD MS MSD MS-RPD Blank CCV1 CCV2 ICV LCS LCSD LCS-RPD	MS Recovery MSD Recovery MS-RPD Relative% Difference Blank Method Blank CCV1 Recovery CCV2 Recovery Dup-A A Reading Dup-B B Reading Dup-RPD1 Relative% Difference ICV Recovery Blank Method Blank CCV1 Recovery ICV Recovery LCS Recovery LCS Recovery LCS-RPD Relative% Difference MS Recovery MSD Recovery CCV2 Recovery LCS Recovery LCS-RPD Relative% Difference Blank Method Blank CCV1 Recovery MS-RPD Relative% Difference Blank Method Blank CCV1 Recovery LCS Recovery LCS-RPD Relative% Difference MS Recovery LCS Rec	MS         Recovery         74.1         %           MSD         Recovery         78.5         %           MS-RPD         Relative% Difference         5.86         %           Blank         Method Blank         < 0.0050	MSD Recovery 74.1 % Spike Amount MSD Recovery 78.5 % Spike Amount MS-RPD Relative% Difference 5.86 % Blank Method Blank < 0.0050 ppm CCV1 Recovery 101 % True Value Dup-A A Reading 2,070 ppm Dup-B B Reading 2,050 ppm Dup-RPD1 Relative% Difference 0.957 % ICV Recovery 99.1 % True Value Dup-RPD1 Relative% Difference 0.957 % ICV Recovery 99.1 % True Value Dup-RPD1 Relative% Difference 0.957 % ICV Recovery 99.1 % True Value Dup-RPD1 Relative% Difference 0.957 % ICV Recovery 99.1 % True Value ICV Recovery 99.4 % True Value ICV Recovery 99.4 % True Value ICV Recovery 99.8 % True Value ICV Recovery 122 % Spike Amount ICS Recovery 122 % Spike Amount ICSD Recovery 1717 % Spike Amount ICSD Recovery 79.1 % Spike Amount MSD Recovery 79.9 % Spike Amount MSD Recovery 79.9 % Spike Amount MSD Recovery 99.2 % True Value ICV Recovery 99.4 % Spike Amount ICV Recovery 99.5 % Spike Amount ICV Recovery 99.7 % True Value ICV Recovery 99.7 % Spike Amount ICV Recovery 99.7 % True Value ICV Recovery 99.7 % Spike Amount ICSD Recovery 99.1 % Spike Amount



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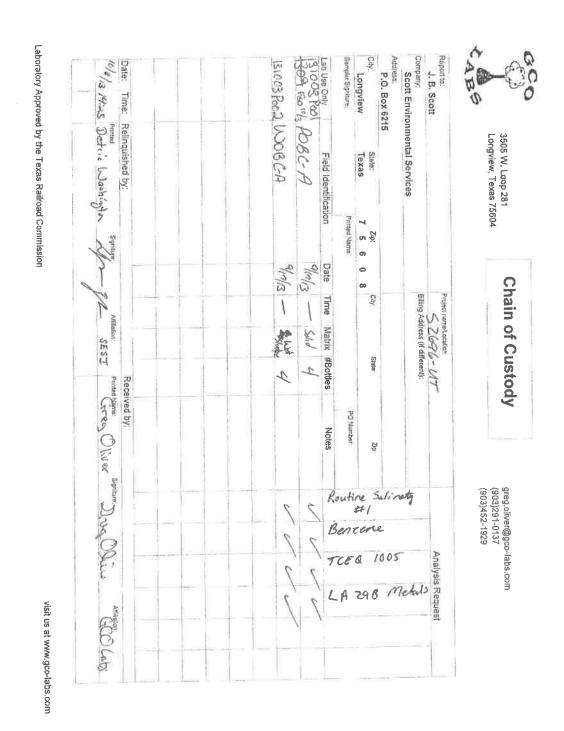
Analyte	QC Parameter		Result Units	Reference Value	Units
Na, water soluble	Blank	Method Blank	< 0.0050 ppm		
	CCV1	Recovery	102 %	True Value	100 ppm
	CCV2	Recovery	101 %	True Value	100 ppm
	Dup-A	A Reading	1,230 ppm		
	Dup-B	B Reading	1,250 ppm		
	Dup-RPD1	Relative% Difference	1.06 %		
	ICV	Recovery	101 %	True Value	50 ppm
Selenium	Blank	Method Blank	< 2.5 ppm		
	CCV1	Recovery	101 %	True Value	10 ppm
	CCV2	Recovery	100 %	True Value	10 ppm
	ICV	Recovery	102 %	True Value	5 ppm
	LCS	Recovery	114 %	Spike Amount	0.1 ppm
	LCSD	Recovery	97.2 %	Spike Amount	0.1 ppm
	LCS-RPD	Relative% Difference	15.7 %		
	MS	Recovery	80.7 %	Spike Amount	0.5 ppm
	MSD	Recovery	82.4 %	Spike Amount	0.5 ppm
	MS-RPD	Relative% Difference	2.13 %		
Silver	Blank	Method Blank	< 2.5 ppm		
	CCV1	Recovery	98.9 %	True Value	2 ppm
	CCV2	Recovery	97.9 %	True Value	2 ppm
	ICV	Recovery	103 %	True Value	1 ppm
	LCS	Recovery	75.1 %	Spike Amount	0.02 ppm
	MS	Recovery	93.9 %	Spike Amount	0.1 ppm
	MSD	Recovery	94.1 %	Spike Amount	0.1 ppm
	MS-RPD	Relative% Difference	0.171 %		
linc	Blank	Method Blank	< 2.5 ppm		
	CCV1	Recovery	99.3 %	True Value	10 ppm
	CCV2	Recovery	99.3 %	True Value	10 ppm
	ICV	Recovery	98.5 %	True Value	5 ppm
	LCS	Recovery	96.9 %	Spike Amount	0.1 ppm
	LCSD	Recovery	94.6 %	Spike Amount	0.1 ppm
	LCS-RPD	Relative% Difference	2.4 %		
	MS	Recovery	78.3 %	Spike Amount	0.5 ppm
	MSD	Recovery	77 %	Spike Amount	0.5 ppm
	MS-RPD	Relative% Difference	1.69 %		'
otal Solids	Blank%	Method Blank	< 0.10 %		
	Dup-A%	A Reading	91.3 %		
	Dup-B%	B Reading	91.1 %		
	Dup-RPD1	Relative% Difference	0.142 %		

Approved by

Greg Oliver, Lab Manager



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#### **Ute Tribal 16-12-1-3-4WH** S2657-UT



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**Customer:** 

J. Blake Scott

Scott Environmental Services, Inc.

P.O. Box 6215

Longview, Texas 75608

USA

Project: **S2657-UT** Cust. Sample: **WOBC-A** 

Collected; 8/22/2013

Received: 9/3/2013

Lab ID: 130903R006 Report Date: 9/16/2013

Analysis	Results	Units	Method	Date	Time	Tech
Day Sample (pH EC and CEC)	Completed	Result	LA 29B	9/3/2013	17:27	fgo
Dry Sample (pH,EC and CEC) EC at Saturation	76.4	mho/cm	LA 29B	9/12/2013	14:30	fgo
Electrical Conductance at 25 C	21.4	mho/cm	LA 29B	9/12/2013	14:30	fgo
	Positive	Result	LA 29B	9/4/2013	8:00	fgo
Hydrophobicity	11.1	SU	LA 29B	9/10/2013	9:20	fgo
oH 1:1 aque(LA29B) @25C			LA 29B	9/10/2013	15:44	fgo
Sample Prep La - 29B	Completed	m⊔/g %	LA 29B LA 29B	9/12/2013	14:00	fgo
Saturation Water Percentage (dried s	28				15:34	fgo
Sodium Adsorption Ratio	1.6	meq/meq	LA 29B	9/9/2013	15:34	-
Soluble Cation Extraction	80/80.0	mL/g	LA 29B	9/9/2013	15:34	fgo
Special Total Ba Metals Prep	500/0.1474	mL/g	LA 29B	9/12/2013		fgo
Extraction (3-Day SESI)	50/5.31	mL/g	LA29B*Modified	9/4/2013	10:33	fgo
Chloride (LA29 3D EXIC)	1,800	mg/kg	LA29B-Mod SESI	9/9/2013	10:29	fgo
Free Alkalinity (Phenyl	6,150	mg/kg	SM 2320B	9/14/2013	9:36	fgo
Total Solids for Dry Wt	88.2	%	SM 2540 G	9/3/2013	17:15	fgo
Solid/Organic Metals Digestion	100/1.34	mL/g 	SW-846 3050B	9/5/2013	13:00	fgo
Arsenic	3.44	mg/kg	SW-846 6010B	9/13/2013	13:59	fgo
Cadmium	< 2.50	mg/kg	SW-846 6010B	9/13/2013	13:59	fgo
Calcium (Water Soluble)	208	meq/L	SW-846 6010B	9/13/2013	13:59	fgo
Chromium	7.01	mg/kg	SW-846 6010B	9/13/2013	13:59	fgo
ead	< 2.50	mg/kg	SW-846 6010B	9/13/2013	13:59	fgo
/lagnesium (Water Soluble)	< 1.00	meq/L	SW-846 6010B	9/13/2013	13:59	fgo
Selenium	< 2.50	mg/kg	SW-846 6010B	9/13/2013	13:59	fgo
Silver	< 2.50	mg/kg	SW-846 6010B	9/13/2013	13:59	fgo
Sodium (Water Soluble)	16.4	meq/L	SW-846 6010B	9/13/2013	13:59	fgo
rue Total Barium	406,000	mg/kg	SW-846 6010B	9/13/2013	13:59	fgo
'inc	21.6	mg/kg	SW-846 6010B	9/13/2013	13:59	fgo
Mercury 1	0.0848	mg/kg	SW-846 7471A	9/13/2013	11:46	fgo
Solid Metal Digestion Hg	100/0.53	mL/g	SW-846 7471A	9/5/2013	13:23	fgo
Benzene	< 0.250	mg/kg	SW-846 8260B	9/7/2013	20:28	fgo
OC 5035 Extraction	10/10.2	mg/kg	SW-846 8260B	9/7/2013	10:00	fgo
Gulfate	< 100	mg/kg	Tex-620-J	9/13/2013	12:02	fgo
Sulfate Extraction/Leaching	50/5.17	mL/g	Tex-620-J	9/10/2013	15:50	fgo
005 TPH Extraction Solid	10/10.5		TNRCC TX 1005	9/7/2013	10:00	fgo
C12 to C28 TPH	209,000	mg/kg	TNRCC TX 1005	9/7/2013	13:46	fgo
228 to C36 TPH	18,700	mg/kg	TNRCC TX 1005	9/7/2013	13:46	fgo
C6 to C12 TPH	11,600	mg/kg	TNRCC TX 1005	9/7/2013	13:46	fgo
C6 to C36 TPH	239,000	mg/kg	TNRCC TX 1005	9/7/2013	13:46	fgo

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# **Quality Control Data**

Analyte	QC Parameter		Result Units	Reference Value	Units
Chloride	Blank	Method Blank	< 1.0 ppm		
	CCV1	Recovery	104 %	True Value	20 ppm
	CCV2	Recovery	92.5 %	True Value	10 ppm
	CCV3	Recovery	95.6 %	True Value	10 ppm
	Dup-A	A Reading	1,800 ppm		
	Dup-B	B Reading	1,730 ppm		
	Dup-RPD1	Relative% Difference	4.03 %		
	LCS-RPD	Relative% Difference	7.55 %		
	MS	Recovery	96.9 %	Spike Amount	8 ppm
C6-C12, TPH	Blank	Method Blank	< 50 ppm		
	CCV1	Recovery	98.6 %	True Value	1000 ppm
	CCV2	Recovery	103 %	True Value	1000 ppm
	Dup-A	A Reading	11,600 ppm		
	Dup-B	B Reading	11,700 ppm		
	Dup-RPD1	Relative% Difference	1.4 %		
	LCS	Recovery	103 %	Spike Amount	500 ppm
	LCSD	Recovery	117 %	Spike Amount	500 ppm
	LCS-RPD	Relative% Difference	13 %		
C12-C28, TPH	Blank	Method Blank	< 50 ppm		
	CCV1	Recovery	107 %	True Value	1000 ppm
	CCV2	Recovery	103 %	True Value	1000 ppm
	Dup-A	A Reading	209,000 ppm		
	Dup-B	B Reading	162,000 ppm		
	Dup-RPD1	Relative% Difference	25.4 %		
	LCS	Recovery	99 %	Spike Amount	500 ppm
	LCSD	Recovery	107 %	Spike Amount	500 ppm
	LCS-RPD	Relative% Difference	8.18 %		
Benzene	Blank	Method Blank	< 0.0010 ppm		
	CCV1	Recovery	98.2 %	True Value	0.02 ppm
	LCS	Recovery	89.2 %	Spike Amount	0.02 ppm
	MS	Recovery	89.3 %	Spike Amount	0.02 ppm
	MSD	Recovery	97.5 %	Spike Amount	0.02 ppm
	MS-RPD	Relative% Difference	8.78 %		
Alkalinity	Dup-A	A Reading	6,150 ppm		
•	Dup-B	B Reading	7,500 ppm		
	Dup-RPD1	Relative% Difference	19.8 %		
Electical Conductivity	Dup-A(EC)	Reading	21.37 mho/c		
	Dup-B(EC)	Reading	20.82 mho/c		
	Dup-RPD1	Relative% Difference	2.61 %		
	Standard1(EC)	Reading	14.92 mho/c	True Value	14.13 mho/c
	Standard2(EC)	Reading	14.95 mho/c	True Value	14.13 mho/c

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Analyte	QC Parameter		Result Units	Reference Value	Unit
SWP	Blank%	Method Blank	< 0.10 %		
	Dup-A%	A Reading	28 %		
	Dup-B%	B Reading	28.5 %		
	Dup-RPD1	Relative% Difference	2 %		
H at 25 C	Dup-A(pH)	Reading	11.14 SU		
	Dup-B(pH)	Reading	11.15 SU		
	Dup-RPD1	Relative% Difference	0.0897 %		
	pH 10 Buffer(1s	t) Reading	9.98 SU	True Value	10.01 SU
	pH 10 Buffer(2r	nd) Reading	10 SU	True Value	10.01 SU
Sulfate	Blank	Method Blank	< 0.10 ppm		
	CCV1	Recovery	107 %	True Value	20 ppm
	CCV2	Recovery	113 %	True Value	20 ppm
	Dup-A	A Reading	< 100 ppm		
	Dup-B	B Reading	< 100 ppm		
	Dup-RPD1	Relative% Difference	< 1.00 %		
	LCS	Recovery	93.7 %	Spike Amount	8000 ppm
	LCSD	Recovery	96.6 %	Spike Amount	8000 ppm
	LCS-RPD	Relative% Difference	3.09 %		
	MS	Recovery	86.2 %	Spike Amount	10 ppm
Barium, True Total	Blank	Method Blank	< 0.25 ppm	•	• •
	CCV1	Recovery	99 %	True Value	10 ppm
	CCV2	Recovery	101 %	True Value	10 ppm
	Dup-A	A Reading	406,000 ppm		
	Dup-B	B Reading	396,000 ppm		
	Dup-RPD1	Relative% Difference	2.27 %		
	ICV	Recovery	95.3 %	True Value	5 ppm
Mercury	Blank	Method Blank	< 0.00020 ppm		
icrodry	CCV1	Recovery	105 %	True Value	0.005 ppm
	CCV2	Recovery	101 %	True Value	0.005 ppm
	LCS	Recovery	99.6 %	Spike Amount	0.005 ppm
	LCSD	Recovery	96.6 %	Spike Amount	0.005 ppm
	LCS-RPD	Relative% Difference	3.11 %	Opino 7 modin	0.000 pp
	MS	Recovery	92.4 %	Spike Amount	0.005 ppm
	MSD	Recovery	99.9 %	Spike Amount	0.005 ppm
	MS-RPD	Relative% Difference	7.86 %	Opine / unount	0.000 pp
raania	Blank	Method Blank	< 2.5 ppm		
Arsenic			101 %	True Value	10 ppm
	CCV3	Recovery	98.3 %	True Value	10 ppm
	CCV4 ICV	Recovery	97.7 %	True Value	5 ppm
		Recovery	79.5 %	Spike Amount	0.5 ppm
	LCS	Recovery	79.5 %	Spike Amount	0.5 ppm
	LCSD	Recovery		Spike Amount	0.5 ррп
	LCS-RPD	Relative% Difference	3.05 %	C-ilea Amazunt	0.5.000
	MS	Recovery	74.8 %	Spike Amount	0.5 ppm
	MSD	Recovery	86.2 %	Spike Amount	0.5 ppm
	MS-RPD	Relative% Difference	14.2 %		
Ca, water soluble	Blank	Method Blank	< 0.0050 ppm	T 1/-1	400
	CCV1	Recovery	91.2 %	True Value	100 ppm
	CCV2	Recovery	98.1 %	True Value	100 ppm
	Dup-A	A Reading	4,170 ppm		



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Analyte	QC Paramete	<u>r</u>	Result Units	Reference Value	Units
	Dup-B	B Reading	4,000 ppm		
	Dup-RPD1	Relative% Difference	4.15 %		
	ICV	Recovery	97.6 %	True Value	50 ppm
Cadmium	Blank	Method Blank	< 2.5 ppm		
	CCV3	Recovery	100 %	True Value	5 ppm
	CCV4	Recovery	97.6 %	True Value	5 ppm
	ICV	Recovery	97.7 %	True Value	2.5 ppm
	LCS	Recovery	79.3 %	Spike Amount	0.25 ppm
	LCSD	Recovery	79 %	Spike Amount	0.25 ppm
	LCS-RPD	Relative% Difference	0.374 %		
	MS	Recovery	79.2 %	Spike Amount	0.25 ppm
	MSD	Recovery	80.2 %	Spike Amount	0.25 ppm
	MS-RPD	Relative% Difference	1.26 %		
Chromium	Blank	Method Blank	< 2.5 ppm		
	CCV3	Recovery	101 %	True Value	10 ppm
	CCV4	Recovery	98.6 %	True Value	10 ppm
	ICV	Recovery	97.7 %	True Value	5 ppm
	LCS	Recovery	81.7 %	Spike Amount	0.5 ppm
	LCSD	Recovery	79.8 %	Spike Amount	0.5 ppm
	LCS-RPD	Relative% Difference	2.31 %		
	MS	Recovery	82 %	Spike Amount	0.5 ppm
	MSD	Recovery	89.4 %	Spike Amount	0.5 ppm
	MS-RPD	Relative% Difference	8.58 %		
.ead	Blank	Method Blank	< 2.5 ppm		
	CCV3	Recovery	101 %	True Value	10 ppm
	CCV4	Recovery	97.8 %	True Value	10 ppm
	ICV	Recovery	97.7 %	True Value	5 ppm
	LCS	Recovery	79.7 %	Spike Amount	0.5 ppm
	LCSD	Recovery	80.1 %	Spike Amount	0.5 ppm
	LCS-RPD	Relative% Difference	0.432 %		
	MS	Recovery	70.3 %	Spike Amount	0.5 ppm
	MSD	Recovery	73.1 %	Spike Amount	0.5 ppm
	MS-RPD	Relative% Difference	3.86 %		
lg, water soluble	Blank	Method Blank	< 1.0 ppm		
	CCV1	Recovery	94.8 %	True Value	100 ppm
	CCV2	Recovery	98.8 %	True Value	100 ppm
	Dup-A	A Reading	< 0.500 ppm		
	Dup-B	B Reading	< 0.500 ppm		
	Dup-RPD1	Relative% Difference	< 1.00 %		
	ICV	Recovery	101 %	True Value	50 ppm
a, water soluble	Blank	Method Blank	< 1.0 ppm		
	CCV1	Recovery	101 %	True Value	100 ppm
	CCV2	Recovery	98.5 %	True Value	100 ppm
	Dup-A	A Reading	377 ppm		
	Dup-B	B Reading	360 ppm		
	Dup-RPD1	Relative% Difference	4.55 %		
	ICV	Recovery	99.5 %	True Value	50 ppm



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Analyte	QC Paramete	r	Result Units	Reference Value	Units
Selenium	Blank	Method Blank	< 2.5 ppm		
	CCV3	Recovery	101 %	True Value	10 ppm
	CCV4	Recovery	98.1 %	True Value	10 ppm
	ICV	Recovery	99.6 %	True Value	5 ppm
	LCS	Recovery	79.2 %	Spike Amount	0.5 ppm
	LCSD	Recovery	76.6 %	Spike Amount	0.5 ppm
	LCS-RPD	Relative% Difference	3.33 %		
	MS	Recovery	69.5 %	Spike Amount	0.5 ppm
	MSD	Recovery	78.5 %	Spike Amount	0.5 ppm
	MS-RPD	Relative% Difference	12.1 %		
Silver	Blank	Method Blank	< 2.5 ppm		
	CCV3	Recovery	100 %	True Value	2 ppm
	CCV4	Recovery	98 %	True Value	2 ppm
	ICV	Recovery	98.4 %	True Value	1 ppm
	LCS	Recovery	80.3 %	Spike Amount	0.1 ppm
	LCSD	Recovery	80.3 %	Spike Amount	0.1 ppm
	LCS-RPD	Relative% Difference	0.028 %		
	MS	Recovery	81.7 %	Spike Amount	0.1 ppm
	MSD	Recovery	84.7 %	Spike Amount	0.1 ppm
	MS-RPD	Relative% Difference	3.61 %		
Zinc	Blank	Method Blank	< 2.5 ppm		
	CCV3	Recovery	100 %	True Value	10 ppm
	CCV4	Recovery	97.4 %	True Value	10 ppm
	ICV	Recovery	97.6 %	True Value	5 ppm
	LCS	Recovery	79.2 %	Spike Amount	0.5 ppm
	LCSD	Recovery	79.2 %	Spike Amount	0.5 ppm
	LCS-RPD	Relative% Difference	0.0169 %		
	MS	Recovery	85.3 %	Spike Amount	0.5 ppm
	MSD	Recovery	88.6 %	Spike Amount	0.5 ppm
	MS-RPD	Relative% Difference	3.81 %		
Total Solids	Blank%	Method Blank	< 0.10 %		
	Dup-A%	A Reading	88.2 %		
	Dup-B%	B Reading	88.2 %		
	Dup-RPD1	Relative% Difference	0.00119 %		

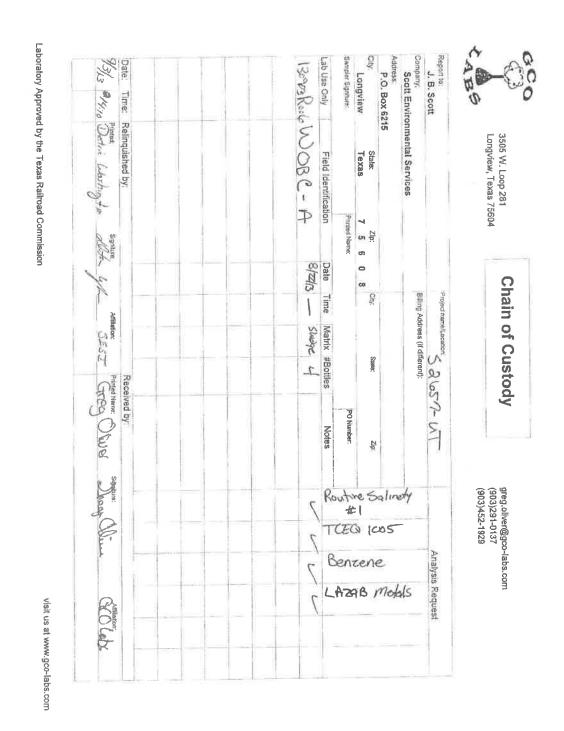
Approved by

Dreg Sures

Greg Oliver, Lab Manager



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Project: S2657-UT Page 6 of 6 Report: 130903R006



#### Close 4-15-22-3-2WH S2720-UT

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**Customer:** 

J. Blake Scott

Scott Environmental Services, Inc.

P.O. Box 6215

Longview, Texas 75608

USA

Project: S2720-UT Cust. Sample: WOBC-A

Collected: 11/12/2013 Received: 12/6/2013

Report Date: 7/8/2014

Lab ID: 131206M002 **Results Units** Method Date Time Tech **Analysis** Dry Sample (pH,EC and CEC) Completed Result LA 29B 12/6/2013 12:17 fgo 12/12/2013 16:10 **LA 29B** fgo EC at Saturation 56.2 mho/cm 13.5 mho/cm **LA 29B** 12/10/2013 15:15 fgo Electrical Conductance at 25 C 8:00 Hydrophobicity Positive Result **LA 29B** 12/7/2013 fgo SU **LA 29B** 12/12/2013 13:40 fgo 11.2 pH 1:1 aque(LA29B) @25C Completed **LA 29B** 12/11/2013 13:25 fgo Sample Prep La - 29B mL/g **LA 29B** 12/12/2013 16:10 fgo Saturation Water Percentage (dried s 24 **LA 29B** 12/13/2013 10:55 fgo Sodium Adsorption Ratio 0.38 meq/meq 80/80 mL/g **LA 29B** 12/9/2013 16:37 fgo Soluble Cation Extraction 500/0.1244 **LA 29B** 12/11/2013 13:25 fgo Special Total Ba Metals Prep mL/g Extraction (3-Day SESI) 50/5.28 mL/g LA29B\*Modified 12/6/2013 13:01 fgo LA29B-Mod SESI 12/20/2013 12:18 fgo Chloride (LA29 3D EXIC) 2,290 mg/kg SM 2320B 12/23/2013 12:15 fgo Free Alkalinity (Phenyl 5,390 mg/kg 14:30 Total Solids for Dry Wt 91.5 % SM 2540 G 12/6/2013 fgo 100/1.36 SW-846 3050B 12/7/2013 18:20 fgo Solid/Organic Metals Digestion mL/g 12/8/2013 16:48 Arsenic 5.63 mg/kg SW-846 6010B fgo 12/8/2013 16:48 Cadmium < 2.50 mg/kg SW-846 6010B fgo SW-846 6010B 12/13/2013 10:55 fgo Calcium (Water Soluble) 132 meq/L 13.8 mg/kg SW-846 6010B 12/8/2013 16:48 fgo Chromium 16:48 Lead 6.95 mg/kg SW-846 6010B 12/8/2013 fgo 10:55 Magnesium (Water Soluble) < 1.00 meq/L SW-846 6010B 12/13/2013 fgo 12/8/2013 16:48 < 2.50 SW-846 6010B fgo Selenium mg/kg < 2.50 mg/kg SW-846 6010B 12/8/2013 16:48 fgo Silver 10:55 SW-846 6010B 12/13/2013 fgo Sodium (Water Soluble) 3.11 meq/L True Total Barium 259,000 mg/kg SW-846 6010B 12/13/2013 10:55 fgo 16:48 mg/kg SW-846 6010B 12/8/2013 fgo Zinc 15.4 12:17 0.109 mg/kg SW-846 7471A 12/18/2013 fgo Mercury 11:35 Solid Metal Digestion Hg 100/0.56 mL/g SW-846 7471A 12/9/2013 fgo 18:39 < 0.250 SW-846 8260B 12/14/2013 fgo Benzene mg/kg 10:36 12/9/2013 10/10.4 SW-846 8260B fgo VOC 5035 Extraction mg/kg 15:05 Sulfate 592 mg/kg Tex-620-J 12/10/2013 fgo 50/5.26 mL/g Tex-620-J 12/9/2013 14:00 fgo Sulfate Extraction/Leaching 10:28 12/14/2013 fgo 10/10.4 TNRCC TX 1005 1005 TPH Extraction Solid mL/g 21:05 87,100 TNRCC TX 1005 12/14/2013 fgo C12 to C28 TPH mg/kg C28 to C36 TPH 18,200 mg/kg TNRCC TX 1005 12/14/2013 21:05 fgo 12/14/2013 21:05 fgo 6,150 TNRCC TX 1005 C6 to C12 TPH mg/kg 21:05 TNRCC TX 1005 12/14/2013 fgo C6 to C36 TPH 111,000 mg/kg

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# **Quality Control Data**

Analyte	QC Paramete	r	Result Units	Reference Value	Units
Chloride	Blank	Method Blank	< 1.0 ppm		
	CCV1	Recovery	103 %	True Value	20 ppm
	CCV2	Recovery	96.2 %	True Value	10 ppm
	CCV3	Recovery	101 %	True Value	10 ppm
	Dup-A	A Reading	3,590 ppm		
	Dup-B	B Reading	3,570 ppm		
	Dup-RPD1	Relative% Difference	0.581 %		
	LCS	Recovery	87 %	Spike Amount	4000 ppm
	LCSD	Recovery	80.7 %	Spike Amount	4000 ppm
	LCS-RPD	Relative% Difference	7.53 %		
	MS	Recovery	101 %	Spike Amount	8 ppm
C6-C12 TPH	Blank	Method Blank	< 50 ppm		
	CCV1	Recovery	96.2 %	True Value	1000 ppm
	CCV2	Recovery	105 %	True Value	1000 ppm
	Dup-A	A Reading	1,870 ppm		
	Dup-B	B Reading	3,180 ppm		
	LCS	Recovery	97.9 %	Spike Amount	500 ppm
	LCSD	Recovery	87.8 %	Spike Amount	500 ppm
	LCS-RPD	Relative% Difference	10.9 %		
C12-C28 TPH	Blank	Method Blank	< 50 ppm		
	CCV1	Recovery	109 %	True Value	1000 ppm
	CCV2	Recovery	119 %	True Value	1000 ppm
	Dup-A	A Reading	67,500 ppm		
	Dup-B	B Reading	64,600 ppm		
	Dup-RPD1	Relative% Difference	4.35 %		
	LCS	Recovery	106 %	Spike Amount	500 ppm
	LCSD	Recovery	101 %	Spike Amount	500 ppm
	LCS-RPD	Relative% Difference	5.05 %		
Benzene	Blank	Method Blank	< 0.0010 ppm		
	CCV1	Recovery	108 %	True Value	0.02 ppm
	LCS	Recovery	108 %	Spike Amount	0.02 ppm
	LCSD	Recovery	109 %	Spike Amount	0.02 ppm
	LCS-RPD	Relative% Difference	0.415 %		
	MS	Recovery	120 %	Spike Amount	0.02 ppm
	MSD	Recovery	105 %	Spike Amount	0.02 ppm
	MS-RPD	Relative% Difference	13.4 %		

Project: S2720-UT Page 2 of 6 Report: 131206M002



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Analyte	QC Parameter		Result	Units	Reference Value		Units
Alkalinity	Dup-A	A Reading	19,400				
	Dup-B	B Reading	20,900	ppm			
	Dup-RPD1	Relative% Difference	7.29	%			
	LCS	Recovery	100	%	Spike Amount	50000	ppm
	LCSD	Recovery	98	%	Spike Amount	50000	ppm
	LCS-RPD	Relative% Difference	2.02	%			
Electrical Conductivity	Dup-A(EC)	Reading	6.38	mho/c			
	Dup-B(EC)	Reading	6.27	mho/c			
	Dup-RPD1	Relative% Difference	1.74	%			
	Standard1(EC)	Reading	14.26	mho/c	True Value	14.13	mho/d
	Standard2(EC)	Reading	14.19	mho/c	True Value	14.13	mho/d
SWP	Blank%	Method Blank	< 0.10	%			
	Dup-A%	A Reading	36.8	%			
	Dup-B%	B Reading	37.6	%			
	Dup-RPD1	Relative% Difference	2.23	%			
pH25	Dup-A(pH)	Reading	10.86	SU			
	Dup-B(pH)	Reading	10.84	SU			
	Dup-RPD1	Relative% Difference	0.184	%			
	pH 10 Buffer(1st)	Reading	9.99	SU	True Value	10.01	SU
	pH 10 Buffer(2nd)	=	9.99	SU	True Value	10.01	SU
Sulfate	Blank	Method Blank	< 0.10	ppm			
	CCV1	Recovery	95.8	%	True Value	20	ppm
	CCV2	Recovery	100	%	True Value	20	ppm
	Dup-A	A Reading	16,000	ppm			
	Dup-B	B Reading	15,800				
	Dup-RPD1	Relative% Difference	1.3				
	LCS	Recovery	98.4	%	Spike Amount	4000	ppm
	LCSD	Recovery	104	%	Spike Amount	4000	ppm
	LCS-RPD	Relative% Difference	5.21	%	'		
	MS	Recovery		%	Spike Amount	10	ppm
Barium, True Total	Blank	Method Blank	< 0.0050		•		
	CCV2	Recovery	97.6		True Value	10	ppm
	CCV3	Recovery	98.2		True Value	10	ppm
	Dup-A	A Reading	60,600	mag			
	Dup-B	B Reading	43,500				
	ICV	Recovery	95.9		True Value	5	ppm
Mercury	Blank	Method Blank	< 0.00020				
	CCV2	Recovery	101		True Value	0.005	ppm
	CCV3	Recovery	100		True Value	0.005	
	LCS	Recovery	108		Spike Amount	0.005	
	LCSD	Recovery	105		Spike Amount	0.005	
	LCS-RPD	Relative% Difference	2.72				
	MS	Recovery	105		Spike Amount	0.005	ppm
	MSD	Recovery	114		Spike Amount	0.005	
	MS-RPD	Relative% Difference	7.95				
		LOGICITO /O DITIOIOTO	7.00	, ,			
Arsenic		Method Blank	< 2.5	ppm			
Arsenic	Blank	Method Blank		ppm %	True Value	10	mgg
Arsenic		Method Blank Recovery Recovery	< 2.5 97.5 90.9	%	True Value True Value		ppm ppm

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Analyte	QC Paramete	r	Result Units	Reference Value	Unit
	LCS	Recovery	95.3 %	Spike Amount	0.5 ppm
	LCSD	Recovery	92.5 %	Spike Amount	0.5 ppm
	LCS-RPD	Relative% Difference	2.88 %		
	MS	Recovery	88.7 %	Spike Amount	0.5 ppm
	MSD	Recovery	85.6 %	Spike Amount	0.5 ppm
	MS-RPD	Relative% Difference	3.48 %		
Ca, water soluble	Blank	Method Blank	< 1.0 ppm		
	CCV1	Recovery	101 %	True Value	100 ppm
	CCV2	Recovery	96.7 %	True Value	100 ppm
	Dup-A	A Reading	1,640 ppm		
	Dup-B	B Reading	2,490 ppm		
	ICV	Recovery	98 %	True Value	50 ppm
Cadmium	Blank	Method Blank	< 2.5 ppm		
	CCV1	Recovery	98 %	True Value	5 ppm
	CCV2	Recovery	93.3 %	True Value	5 ppm
	ICV	Recovery	96.2 %	True Value	2.5 ppm
	LCS	Recovery	93.8 %	Spike Amount	0.25 ppm
	LCSD	Recovery	93.1 %	Spike Amount	0.25 ppm
	LCS-RPD	Relative% Difference	0.756 %		
	MS	Recovery	86.6 %	Spike Amount	0.25 ppm
	MSD	Recovery	86.8 %	Spike Amount	0.25 ppm
	MS-RPD	Relative% Difference	0.213 %		
Chromium	Blank	Method Blank	< 2.5 ppm		
	CCV1	Recovery	97.1 %	True Value	10 ppm
	CCV2	Recovery	91.7 %	True Value	10 ppm
	ICV	Recovery	96.4 %	True Value	5 ppm
	LCS	Recovery	95.6 %	Spike Amount	0.5 ppm
	LCSD	Recovery	95 %	Spike Amount	0.5 ppm
	LCS-RPD	Relative% Difference	0.678 %	•	
	MSD	Recovery	79.2 %	Spike Amount	0.5 ppm
_ead	Blank	Method Blank	< 2.5 ppm	·	
	CCV1	Recovery	97.6 %	True Value	10 ppm
	CCV2	Recovery	92.8 %	True Value	10 ppm
	ICV	Recovery	96.5 %	True Value	5 ppm
	LCS	Recovery	95.2 %	Spike Amount	0.5 ppm
	LCSD	Recovery	94.4 %	Spike Amount	0.5 ppm
	LCS-RPD	Relative% Difference	0.852 %		
	MS	Recovery	60.2 %	Spike Amount	0.5 ppm
	MSD	Recovery	78.8 %	Spike Amount	0.5 ppm
	MS-RPD	Relative% Difference	26.7 %		
Mg, water soluble	Blank	Method Blank	< 1.0 ppm		
419, Water 3010bic	CCV1	Recovery	102 %	True Value	100 ppm
	CCV2	Recovery	98.2 %	True Value	100 ppm
	Dup-A	A Reading	< 0.500 ppm		-  -  -  -  -  -  -  -  -  -  -  -
	Dup-B	B Reading	< 0.500 ppm		
	Dup-RPD1	Relative% Difference	< 1.00 %		
	Dup-IXED I	Telative // Dilleterioe	- 1.00 /0		



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Analyte	QC Parameter		Result Units	Reference Value	Unit
Na, water soluble	Blank	Method Blank	< 1.0 ppm		
	CCV1	Recovery	101 %	True Value	100 ppm
	CCV2	Recovery	96.7 %	True Value	100 ppm
	Dup-A	A Reading	629 ppm		
	Dup-B	B Reading	647 ppm		
	Dup-RPD1	Relative% Difference	2.79 %		
	ICV	Recovery	100 %	True Value	50 ppm
elenium	Blank	Method Blank	< 2.5 ppm		
	CCV1	Recovery	97.2 %	True Value	10 ppm
	CCV2	Recovery	90.3 %	True Value	10 ppm
	ICV	Recovery	98.1 %	True Value	5 ppm
	LCS	Recovery	92.4 %	Spike Amount	0.5 ppm
	LCSD	Recovery	88.7 %	Spike Amount	0.5 ppm
	LCS-RPD	Relative% Difference	4.05 %		
	MS	Recovery	89.7 %	Spike Amount	0.5 ppm
	MSD	Recovery	87.8 %	Spike Amount	0.5 ppm
	MS-RPD	Relative% Difference	2.1 %		
ilver	Blank	Method Blank	< 2.5 ppm		
	CCV1	Recovery	97.4 %	True Value	2 ppm
	CCV2	Recovery	90.7 %	True Value	2 ppm
	ICV	Recovery	96.3 %	True Value	1 ppm
	LCS	Recovery	96.2 %	Spike Amount	0.1 ppm
	LCSD	Recovery	95.3 %	Spike Amount	0.1 ppm
	LCS-RPD	Relative% Difference	1.03 %		
	MS	Recovery	95.2 %	Spike Amount	0.1 ppm
	MSD	Recovery	96.1 %	Spike Amount	0.1 ppm
	MS-RPD	Relative% Difference	0.922 %		
inc	Blank	Method Blank	< 2.5 ppm		
	CCV1	Recovery	98.1 %	True Value	10 ppm
	CCV2	Recovery	92.8 %	True Value	10 ppm
	ICV	Recovery	96 %	True Value	5 ppm
	LCS	Recovery	92.8 %	Spike Amount	0.5 ppm
	LCSD	Recovery	91.9 %	Spike Amount	0.5 ppm
	LCS-RPD	Relative% Difference	1.03 %		
	MS	Recovery	83.5 %	Spike Amount	0.5 ppm
	MSD	Recovery	104 %	Spike Amount	0.5 ppm
	MS-RPD	Relative% Difference	22 %		
otal Solids	Blank%	Method Blank	< 0.10 %		
	Dup-A%	A Reading	82.1 %		
	Dup-B%	B Reading	82.3 %		
	Dup-RPD1	Relative% Difference	0.204 %		
		Drea Ol	ive		
Approved by		Greg Oliver, Lab M	nagar		

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Laboratory Approved by the Texas Railroad Commission

Report to:
J. B. Scott 18/4/3 11:50 Detre Washington Company;
Scott Environmental Services Date: Lab Use Only Sampler Signiture: 131206Moc2 P.O. Box 6215 Longview Time: Relinquished by: 3505 W. Loop 281 Longview, Texas 75604 WOBC-A Texas Field Identification Printed Name 6 Date Time Billing Address (if different): Project name/Location: 501:d 4 Matrix #Bottles State 52720-UT CALED Office South PO Number: Notes Zþ: Routine Salinity #1 Benzere Analysis Request TCE 0 1005 LA 29B metals

Chain of Custody

greg.oliver@gco-labs.com (903)291-0137 (903)452-1929

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#### Lejeune 1-17-3-2WH S2669-UT



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**Customer:** 

C6 to C12 TPH

C6 to C36 TPH

J. Blake Scott

Scott Environmental Services, Inc.

P.O. Box 6215

Longview, Texas 75608

USA

Project: **S2669-UT**Cust. Sample: **WOBC** 

Lab ID: 131023Q001

Collected; 10/14/2013

Received: 10/23/2013 Report Date: 11/7/2013

**Analysis Results Units** Method Date Time Tech Dry Sample (pH,EC and CEC) Completed Result LA 29B 10/23/2013 17:00 fgo EC at Saturation mho/cm **LA 29B** 10/29/2013 16:00 77.5 fgo Electrical Conductance at 25 C LA 29B 10/29/2013 16:00 21.4 mho/cm fgo Positive Result **LA 29B** 10/24/2013 8:00 Hydrophobicity fgo pH 1:1 aque(LA29B) @25C 10.8 SU **LA 29B** 10/28/2013 13:10 fgo Sample Prep La - 29B Completed **LA 29B** 10/28/2013 15:15 mL/o fgo Saturation Water Percentage (dried s 28 % **LA 29B** 10/28/2013 14:00 fgo Sodium Adsorption Ratio 1.7 meg/meg **LA 29B** 10/29/2013 12:01 fao 80/80.0 Soluble Cation Extraction mL/g **LA 29B** 10/28/2013 13:00 fgo Special Total Ba Metals Prep 500/0.1540 mL/g **LA 29B** 10/28/2013 15:15 fgo Extraction (3-Day SESI) 50/5.20 LA29B\*Modified 10/23/2013 15:49 mL/g fgo Chloride (LA29 3D EXIC) 4,940 mg/kg LA29B-Mod SESI 12/28/2013 14:29 fgo Free Alkalinity (Phenyl 5,950 SM 2320B 10/30/2013 12:40 mg/kg fgo SM 2540 G 10/23/2013 16:30 Total Solids for Dry Wt 88.0 % fgo Solid/Organic Metals Digestion 100/1.35 mL/g SW-846 3050B 10/25/2013 13:22 fgo 10/29/2013 12:01 Arsenic 4.45 mg/kg SW-846 6010B fgo Cadmium < 2.50 SW-846 6010B 10/29/2013 12:01 mg/kg fgo Calcium (Water Soluble) SW-846 6010B 10/29/2013 12:01 213 meq/L fgo Chromium 9.28 mg/kg SW-846 6010B 10/29/2013 12:01 fgo Lead 6.25 mg/kg SW-846 6010B 10/29/2013 12:01 fgo Magnesium (Water Soluble) < 1.00 10/29/2013 12:01 meq/L SW-846 6010B fgo Selenium SW-846 6010B 10/29/2013 12:01 < 2.50 mg/kg fgo Silver < 2.50 mg/kg SW-846 6010B 10/29/2013 12:01 fgo Sodium (Water Soluble) 17.7 meg/L SW-846 6010B 10/29/2013 12:01 fgo True Total Barium 239,000 SW-846 6010B 10/29/2013 12:01 mg/kg fgo Zinc 12:01 26.9 mg/kg SW-846 6010B 10/29/2013 fgo Mercury 0.0496 mg/kg SW-846 7471A 10/29/2013 14:51 fgo Solid Metal Digestion Hg 100/0.55 mL/g SW-846 7471A 10/24/2013 13:30 fgo SW-846 8260B 10/27/2013 15:45 Benzene < 0.136 mg/kg fgo 10/10.1 VOC 5035 Extraction SW-846 8260B 10/25/2013 10:19 mg/kg fao Sulfate 503 mg/kg Tex-620-J 10/29/2013 13:01 fgo Sulfate Extraction/Leaching 50/5.19 mL/g Tex-620-J 10/25/2013 15:53 fgo 1005 TPH Extraction Solid 10/10.2 TNRCC TX 1005 10/25/2013 10:03 mL/g fgo C12 to C28 TPH 127,000 mg/kg TNRCC TX 1005 10/27/2013 13:57 fgo C28 to C36 TPH 18,300 TNRCC TX 1005 10/27/2013 13:57 mg/kg fgo

Project: S2669-UT Page 1 of 8 Report: 131023Q001-2

TNRCC TX 1005

TNRCC TX 1005

10/27/2013

10/27/2013

13:57

14:57

fgo

fgo

7,480

153,000

mg/kg

mg/kg



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 Project: **S2669-UT** Collected; 10/14/2013

 Cust. Sample: **POBC** Received: 10/23/2013

Lab ID: 131023Q002 Report Date: 11/7/2013

			Report Date. 11/1			
Analysis	Results	Units	Method	Date	Time	Tech
Dr. Comple (pH EC and CEC)	Completed	Dogult	I A 20B	40/22/2042	17:00	fan
Dry Sample (pH,EC and CEC)	Completed		LA 29B	10/23/2013	17:00	fgo
EC at Saturation	65.0	mho/cm	LA 29B	10/29/2013	16:00	fgo
Electrical Conductance at 25 C	18.2	mho/cm	LA 29B	10/29/2013	16:00	fgo
Hydrophobicity	Positive	Result	LA 29B	10/24/2013	8:00	fgo
pH 1:1 aque(LA29B) @25C	10.0	SU	LA 29B	10/28/2013	13:10	fgo
Sample Prep La - 29B	Completed	mL/g	LA 29B	10/28/2013	15:15	fgo
Saturation Water Percentage (dried s	28	%	LA 29B	10/28/2013	14:00	fgo
Sodium Adsorption Ratio	2.3	meq/meq	LA 29B	10/29/2013	12:01	fgo
Soluble Cation Extraction	80/80.0	mL/g	LA 29B	10/28/2013	13:00	fgo
Special Total Ba Metals Prep	500/0.1216	mL/g	LA 29B	10/28/2013	15:15	fgo
Extraction (3-Day SESI)	50/5.17	mL/g	LA29B*Modified	10/23/2013	15:49	fgo
Chloride (LA29 3D EXIC)	4,940	mg/kg	LA29B-Mod SESI	12/28/2013	15:20	fgo
Free Alkalinity (Phenyl	6,950	mg/kg	SM 2320B	10/30/2013	12:40	fgo
Total Solids for Dry Wt	90.5	%	SM 2540 G	10/23/2013	16:30	fgo
Solid/Organic Metals Digestion	100/1.38	m∐/g	SW-846 3050B	10/25/2013	13:22	fgo
Arsenic	2.57	mg/kg	SW-846 6010B	10/29/2013	12:01	fgo
Cadmium	< 2.50	mg/kg	SW-846 6010B	10/29/2013	12:01	fgo
Calcium (Water Soluble)	175	meq/L	SW-846 6010B	10/29/2013	12:01	fgo
Chromium	16.7	mg/kg	SW-846 6010B	10/29/2013	12:01	fgo
Lead	6.20	mg/kg	SW-846 6010B	10/29/2013	12:01	fgo
Magnesium (Water Soluble)	< 1.00	meq/L	SW-846 6010B	10/29/2013	12:01	fgo
Selenium	< 2.50	mg/kg	SW-846 6010B	10/29/2013	12:01	fgo
Silver	< 2.50	mg/kg	SW-846 6010B	10/29/2013	12:01	fgo
Sodium (Water Soluble)	21.2	meq/L	SW-846 6010B	10/29/2013	12:01	fgo
Frue Total Barium	145,000	mg/kg	SW-846 6010B	10/29/2013	12:01	fgo
Zinc	29.9	mg/kg	SW-846 6010B	10/29/2013	12:01	fgo
Mercury	0.182	mg/kg	SW-846 7471A	10/29/2013	14:51	fgo
Solid Metal Digestion Hg	100/0.57	mL/g	SW-846 7471A	10/24/2013	13:30	fgo
Benzene	< 0.152	mg/kg	SW-846 8260B	10/27/2013	17:04	fgo
OC 5035 Extraction	10/10.3	mg/kg	SW-846 8260B	10/25/2013	10:19	fgo
Sulfate	1,420	mg/kg	Tex-620-J	10/29/2013	15:57	fgo
Sulfate Extraction/Leaching	50/5.27	m∐/g	Tex-620-J	10/25/2013	15:53	fgo
1005 TPH Extraction Solid	10/10.5	mL/g	TNRCC TX 1005	10/25/2013	10:03	fgo
C12 to C28 TPH	93,800	mg/kg	TNRCC TX 1005	10/27/2013	14:56	fgo
C28 to C36 TPH	17,200	mg/kg	TNRCC TX 1005	10/27/2013	14:56	fgo
	4,270	mg/kg	TNRCC TX 1005	10/27/2013	14:56	fgo
C6 to C12 TPH						

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## **Quality Control Data**

Analyte	QC Parameter		Result Units	Reference Value	Units
Chloride	Blank	Method Blank	< 1.0 ppm		
	CCV1	Recovery	102 %	True Value	20 ppm
	CCV2	Recovery	94.6 %	True Value	10 ppm
	CCV3	Recovery	96.9 %	True Value	10 ppm
	Dup-A	A Reading	4,940 ppm		
	Dup-B	B Reading	5,180 ppm		
	Dup-RPD1	Relative% Difference	4.65 %		
	LCS	Recovery	97.4 %	Spike Amount	9000 ppm
	LCSD	Recovery	85.9 %	Spike Amount	9000 ppm
	LCS-RPD	Relative% Difference	12.5 %		
	MS	Recovery	105 %	Spike Amount	8 ppm
C6-C12 TPH	Blank	Method Blank	< 50 ppm		
	CCV1	Recovery	96 %	True Value	1000 ppm
	CCV2	Recovery	108 %	True Value	1000 ppm
	Dup-A	A Reading	7,480 ppm		
	Dup-B	B Reading	5,310 ppm		
	Dup-RPD1	Relative% Difference	33.9 H %		
	LCS	Recovery	89.8 %	Spike Amount	500 ppm
	LCSD	Recovery	99.5 %	Spike Amount	500 ppm
	LCS-RPD	Relative% Difference	10.3 %		
C12-C28 TPH	Blank	Method Blank	< 50 ppm		
	CCV1	Recovery	104 %	True Value	1000 ppm
	CCV2	Recovery	109 %	True Value	1000 ppm
	Dup-A	A Reading	127,000 ppm		
	Dup-B	B Reading	114,000 ppm		
	Dup-RPD1	Relative% Difference	10.8 %		
	LCS	Recovery	99.8 %	Spike Amount	500 ppm
	LCSD	Recovery	102 %	Spike Amount	500 ppm
	LCS-RPD	Relative% Difference	1.88 %		
Benzene	Blank	Method Blank	< 0.0010 ppm		
	CCV1	Recovery	114 %	True Value	0.02 ppm
	LCS	Recovery	110 %	Spike Amount	0.02 ppm
	LCSD	Recovery	110 %	Spike Amount	0.02 ppm
	LCS-RPD	Relative% Difference	0.818 %		
	MS	Recovery	98 %	Spike Amount	0.02 ppm
	MSD	Recovery	98.5 %	Spike Amount	0.02 ppm
	MS-RPD	Relative% Difference	0.407 %	*	

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Analyte	QC Parameter		Result U	nits	Reference Value	50000 ppm 50000 ppm 14.13 mho/c 14.13 mho/c		
Alkalinity	Dup-A	A Reading	5,950 pp	pm				
	Dup-B	B Reading	5,940 pp	pm				
	Dup-RPD1	Relative% Difference	0.0396 %	•				
	LCS	Recovery	96 %	, D	Spike Amount	50000	ppm	
	LCSD	Recovery	102 %	, D	Spike Amount		• •	
	LCS-RPD	Relative% Difference	6.06 %	,				
Electrical Conductivity	Dup-A(EC)	Reading	21.42 m	nho/c				
,	Dup-B(EC)	Reading	21.29 m	nho/c				
	Dup-RPD1	Relative% Difference	0.609 %	,				
	Standard1(EC)	Reading	14.79 m	nho/c	True Value	14.13	mho/c	
	Standard2(EC)	Reading	14.82 m	nho/c	True Value	14.13	mho/c	
SWP	Blank%	Method Blank	< 0.10 %	5				
	Dup-A%	A Reading	27.6 %					
	Dup-B%	B Reading	26.6 %					
	Dup-RPD1	Relative% Difference	3.81 %					
pH at 25C	Dup-A(pH)	Reading	10.78 SI					
pri ut 200	Dup-B(pH)	Reading	10.78 St	_				
	Dup-RPD1	Relative% Difference	< 0.100 %					
	pH 10 Buffer(1st)		9.99 St		True Value	10.01	SU	
	pH 10 Buffer(2nd)	•	9.99 St	_	True Value	10.01		
Sulfate	Blank	Method Blank	< 0.10 pp	_	Tue value	10.01	00	
Juliate	CCV1	Recovery	102 %		True Value	40	ppm	
	CCV2		93.4 %		True Value		ppm	
	CCV3	Recovery Recovery	98 %		True Value		ppm	
	Dup-A	A Reading	503 pp		True value	20	рріп	
	Dup-B	B Reading	540 pp					
	•	Relative% Difference	7.05 %					
	Dup-RPD1 LCS		99.5 %		Cniko Amount	5000	nnm	
		Recovery			Spike Amount	5000		
	LCSD	Recovery	108 %		Spike Amount	5000	ppm	
	LCS-RPD	Relative% Difference	8.21 %		On the America	0		
	MS	Recovery	93.1 %		Spike Amount	8	ppm	
Barium, True Total	Blank	Method Blank	< 0.10 pp		T	40		
	CCV2	Recovery	99.3 %		True Value		ppm	
	CCV3	Recovery	99.5 %		True Value	10	ppm	
	Dup-A	A Reading	239,000 pp					
	Dup-B	B Reading	210,000 pp					
	Dup-RPD1	Relative% Difference	13 %					
	ICV	Recovery	95.6 %		True Value	5	ppm	
Mercury	Blank	Method Blank	< 0.00020 pp					
	CCV1	Recovery	105 %		True Value	0.005	ppm	
	CCV3	Recovery	107 %		True Value	0.005	ppm	
	LCS	Recovery	99.8 %		Spike Amount	0.005		
	LCSD	Recovery	99.7 %		Spike Amount	0.005	ppm	
	LCS-RPD	Relative% Difference	0.0427 %					
	MS	Recovery	85.6 %		Spike Amount	0.005	ppm	
	MSD	Recovery	97.5 %		Spike Amount	0.005	ppm	
	MS-RPD	Relative% Difference	13.1 %					



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Analyte	QC Paramete	<u> </u>	Result Units					
Arsenic	Blank	Method Blank	< 2.5 ppm					
	CCV3	Recovery	98.5 %	True Value	10 ppm			
	CCV4	Recovery	101 %	True Value	10 ppm			
	ICV	Recovery	97.4 %	True Value	5 ppm			
	LÇS	Recovery	83.8 %	Spike Amount	0.5 ppm			
	LCSD	Recovery	90 %	Spike Amount	0.5 ppm			
	LCS-RPD	Relative% Difference	7.12 %					
	MS	Recovery	74.9 %	Spike Amount	0.5 ppm			
	MSD	Recovery	85 %	Spike Amount	0.5 ppm			
	MS-RPD	Relative% Difference	12.7 %					
Ca, water soluble	Blank	Method Blank	< 0.0050 ppm					
	CCV1	Recovery	95.1 %	True Value	100 ppm			
	CCV2	Recovery	99.2 %	True Value	100 ppm			
	Dup-A	A Reading	4,260 ppm					
	Dup-B	B Reading	4,370 ppm					
	Dup-RPD1	Relative% Difference	2.4 %					
	ICV	Recovery	98.6 %	True Value	50 ppm			
Cadmium	Blank	Method Blank	< 2.5 ppm					
	CCV3	Recovery	98.5 %	True Value	5 ppm			
	CCV4	Recovery	101 %	True Value	5 ppm			
	ICV	Recovery	97.2 %	True Value	2.5 ppm			
	LCS	Recovery	87.1 %	Spike Amount	0.25 ppm			
	LCSD	Recovery	89.4 %	Spike Amount	0.25 ppm			
	LCS-RPD	Relative% Difference	2.59 %					
	MS	Recovery	84.8 %	Spike Amount	0.25 ppm			
	MSD	Recovery	86.9 %	Spike Amount	0.25 ppm			
	MS-RPD	Relative% Difference	2.49 %					
Chromium	Blank	Method Blank	< 2.5 ppm					
	CCV3	Recovery	99.3 %	True Value	10 ppm			
	CCV4	Recovery	101 %	True Value	10 ppm			
	ICV	Recovery	97.7 %	True Value	5 ppm			
	LCS	Recovery	86.7 %	Spike Amount	0.5 ppm			
	LCSD	Recovery	92.2 %	Spike Amount	0.5 ppm			
	LCS-RPD	Relative% Difference	6.12 %	•	• • • • • • • • • • • • • • • • • • • •			
	MS	Recovery	81.1 %	Spike Amount	0.5 ppm			
	MSD	Recovery	87.7 %	Spike Amount	0.5 ppm			
	MS-RPD	Relative% Difference	7.88 %	•	• • • • • • • • • • • • • • • • • • • •			
_ead	Blank	Method Blank	< 2.5 ppm					
	CCV3	Recovery	99 %	True Value	10 ppm			
	CCV4	Recovery	101 %	True Value	10 ppm			
	ICV	Recovery	97.6 %	True Value	5 ppm			
	LCS	Recovery	88.6 %	Spike Amount	0.5 ppm			
	LCSD	Recovery	90.9 %	Spike Amount	0.5 ppm			
	LCS-RPD	Relative% Difference	2.56 %	1	FF.''			
	MS	Recovery	81.7 %	Spike Amount	0.5 ppm			
	MSD	Recovery	80 %	Spike Amount	0.5 ppm			
	MS-RPD	Relative% Difference	2.21 %		0.0 pp.11			

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Analyte	QC Paramete	r	Result Units	Reference Value	Units
Mg, water soluble	Blank	Method Blank	< 0.0050 ppm		
	CCV1	Recovery	99.8 %	True Value	100 ppm
	CCV2	Recovery	99.1 %	True Value	100 ppm
	Dup-A	A Reading	< 0.500 ppm		
	Dup-B	B Reading	< 0.500 ppm		
	Dup-RPD1	Relative% Difference	< 1.00 %		
	ICV	Recovery	101 %	True Value	50 ppm
Na, water soluble	Blank	Method Blank	< 1.0 ppm		
	CCV1	Recovery	98 %	True Value	100 ppm
	CCV2	Recovery	99.1 %	True Value	100 ppm
	Dup-A	A Reading	408 ppm		
	Dup-B	B Reading	409 ppm		
	Dup-RPD1	Relative% Difference	0.215 %		
	ICV	Recovery	100 %	True Value	50 ppm
Selenium	Blank	Method Blank	< 2.5 ppm		
	CCV3	Recovery	98.4 %	True Value	10 ppm
	CCV4	Recovery	101 %	True Value	10 ppm
	ICV	Recovery	99.5 %	True Value	5 ppm
	LCS	Recovery	85 %	Spike Amount	0.5 ppm
	LCSD	Recovery	90.3 %	Spike Amount	0.5 ppm
	LCS-RPD	Relative% Difference	6.05 %	•	
	MS	Recovery	80.1 %	Spike Amount	0.5 ppm
	MSD	Recovery	88.5 %	Spike Amount	0.5 ppm
	MS-RPD	Relative% Difference	9.96 %	•	• • •
Silver	Blank	Method Blank	< 2.5 ppm		
	CCV3	Recovery	99.7 %	True Value	2 ppm
	CCV4	Recovery	102 %	True Value	2 ppm
	ICV	Recovery	102 %	True Value	1 ppm
	LCS	Recovery	90.6 %	Spike Amount	0.1 ppm
	LCSD	Recovery	92.8 %	Spike Amount	0.1 ppm
	LCS-RPD	Relative% Difference	2.47 %	•	
	MS	Recovery	99.8 %	Spike Amount	0.1 ppm
	MSD	Recovery	103 %	Spike Amount	0.1 ppm
	MS-RPD	Relative% Difference	3.16 %		
Zinc	Blank	Method Blank	< 2.5 ppm		
	CCV3	Recovery	98.7 %	True Value	10 ppm
	CCV4	Recovery	101 %	True Value	10 ppm
	ICV	Recovery	97.5 %	True Value	5 ppm
	LCS	Recovery	85.9 %	Spike Amount	0.5 ppm
	LCSD	Recovery	89.4 %	Spike Amount	0.5 ppm
	LCS-RPD	Relative% Difference	3.98 %	Spike Amount	о.о ррш
	MS		91 %	Spike Amount	0.5.000
	MSD	Recovery Recovery		•	0.5 ppm
		•	95.5 %	Spike Amount	0.5 ppm
otal Calida	MS-RPD	Relative% Difference	4.89 %		
otal Solids	Blank%	Method Blank	< 0.10 %		
	Dup-A%	A Reading	88 %		
	Dup-B%	B Reading	88.4 %		
	Dup-RPD1	Relative% Difference	0.38 %		



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Approved by	Dreg Oliver	
	Greg Oliver, Lab Manager	

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Laboratory Approved by the Texas Railroad Commission J. B. Scott Company; Scott Environmental Services Lab Use Only Address: P.O. Box 6215 13/03/2002 POBC- C 131023 POBC-C Sampler Signiture: Longview Time: 14.50 Detro Weshington Relinquished by 3505 W. Loop 281 Longview, Texas 75604 State: Texas Field Identification Printed Name: 매형 Film by Date 0 Chain of Custody Time Billing Address (if different): Affiliation: Shope Solid Matrix #Bottles 2 2 Lind Cross Received by: PO Number: Notes ĠZ Sandy Con greg.ofiver@gco-labs.com (903)291-0137 (903)452-1929 Routine Sciling #1 Benere TCEO KUUS Analysis Request 9 LAZAB Metals visit us at www.gco-labs.com GCOLLS

## Patterson 4-9-3-3WH S2704-UT



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Customer:

J. Blake Scott

Scott Environmental Services, Inc.

P.O. Box 6215

Longview, Texas 75608

USA

Project: **S2704-UT** Cust. Sample: **WOBC** 

Collected; 10/14/2013 Received: 10/23/2013

Lab ID: 131023Q003

Report Date: 11/7/2013

Analysis	Results	Units	Method	Date	Time	Tech
Dry Sample (pH,EC and CEC)	Completed	Result	LA 29B	10/23/2013	17:00	fgo
EC at Saturation	72.7	mho/cm	LA 29B	10/29/2013	16:00	fgo
Electrical Conductance at 25 C	26.9	mho/cm	LA 29B	10/29/2013	16:00	fgo
Hydrophobicity	Positive	Result	LA 29B	10/24/2013	8:00	fgo
pH 1:1 aque(LA29B) @25C	10.7	SU	LA 29B	10/28/2013	13:10	fgo
Sample Prep La - 29B	Completed	m∐g	LA 29B	10/28/2013	15:15	fgo
Saturation Water Percentage (dried s	37	%	LA 29B	10/28/2013	14:00	fgo
Sodium Adsorption Ratio	2.8	meq/meq	LA 29B	10/29/2013	12:01	fgo
Soluble Cation Extraction	80/80.0	mL/g	LA 29B	10/28/2013	13:00	fgo
Special Total Ba Metals Prep	500/0.1168	mL/g	LA 29B	10/28/2013	15:15	fgo
Extraction (3-Day SESI)	50/5.33	mL/g	LA29B*Modified	10/23/2013	15:49	fgo
Chloride (LA29 3D EXIC)	8,320	mg/kg	LA29B-Mod SESI	12/28/2013	15:34	fgo
Free Alkalinity (Phenyl	4,970	mg/kg	SM 2320B	10/30/2013	12:40	fgo
Total Solids for Dry Wt	89.6	%	SM 2540 G	10/23/2013	16:30	fgo
Solid/Organic Metals Digestion	100/1.36	m∐g	SW-846 3050B	10/25/2013	13:22	fgo
Arsenic	4.21	mg/kg	SW-846 6010B	10/29/2013	12:01	fgo
Cadmium	< 2.50	mg/kg	SW-846 6010B	10/29/2013	12:01	fgo
Calcium (Water Soluble)	248	meq/L	SW-846 6010B	10/29/2013	12:01	fgo
Chromium	13.1	mg/kg	SW-846 6010B	10/29/2013	12:01	fgo
Lead	8.54	mg/kg	SW-846 6010B	10/29/2013	12:01	fgo
Magnesium (Water Soluble)	< 1.00	meq/L	SW-846 6010B	10/29/2013	12:01	fgo
Selenium	< 2.50	mg/kg	SW-846 6010B	10/29/2013	12:01	fgo
Silver	< 2.50	mg/kg	SW-846 6010B	10/29/2013	12:01	fgo
Sodium (Water Soluble)	31.6	meq/L	SW-846 6010B	10/29/2013	12:01	fgo
True Total Barium	175,000	mg/kg	SW-846 6010B	10/29/2013	12:01	fgo
Zinc	49.3	mg/kg	SW-846 6010B	10/29/2013	12:01	fgo
Mercury	0.0562	mg/kg	SW-846 7471A	10/29/2013	14:51	fgo
Solid Metal Digestion Hg	100/0.57	mL/g	SW-846 7471A	10/24/2013	13:30	fgo
Benzene	< 0.192	mg/kg	SW-846 8260B	10/27/2013	17:30	fgo
VOC 5035 Extraction	10/10.3	mg/kg	SW-846 8260B	10/25/2013	10:19	fgo
Sulfate	509	mg/kg	Tex-620-J	10/29/2013	14:10	fgo
Sulfate Extraction/Leaching	50/5.48	mL/g	Tex-620-J	10/25/2013	15:53	fgo
1005 TPH Extraction Solid	10/10.2	mL/g	TNRCC TX 1005	10/25/2013	10:03	fgo
C12 to C28 TPH	120,000	mg/kg	TNRCC TX 1005	10/27/2013	15:26	fgo
C28 to C36 TPH	13,800	mg/kg	TNRCC TX 1005	10/27/2013	15:26	fgo
C6 to C12 TPH	7,240	mg/kg	TNRCC TX 1005	10/27/2013	15:26	fgo
C6 to C36 TPH	141,000	mg/kg	TNRCC TX 1005	10/27/2013	15:26	fgo

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 Project: S2704-UT
 Collected; 10/14/2013

 Cust. Sample: POBC
 Received: 10/23/2013

Lab ID: 131023Q004 Report Date: 11/7/2013

			report bate. 11/1			
Analysis	Results	Units	Method	Date	Time	Tech
Dry Sample (pH,EC and CEC)	Completed	Result	LA 29B	10/23/2013	17:00	fgo
EC at Saturation	59.3	mho/cm	LA 29B	10/29/2013	16:00	fgo
Electrical Conductance at 25 C	20.5	mho/cm	LA 29B	10/29/2013	16:00	
Hydrophobicity	Positive	Result	LA 29B	10/24/2013	8:00	fgo fgo
pH 1:1 aque(LA29B) @25C	10.3	SU	LA 29B	10/28/2013	13:10	_
Sample Prep La - 29B	Completed	mL/g	LA 29B LA 29B		15:15	fgo
Saturation Water Percentage (dried s	35	™29 %	LA 29B LA 29B	10/28/2013 10/28/2013	14:00	fgo
Sodium Adsorption Ratio	2.2	meq/meq	LA 29B	10/29/2013	12:01	fgo
Soluble Cation Extraction	80/80.0		LA 29B LA 29B		13:00	fgo
Special Total Ba Metals Prep		mL/g mL/g		10/28/2013		fgo
	500/0.1442	=	LA 29B	10/28/2013	15:15	fgo
Extraction (3-Day SESI)	50/5.20	mL/g ma/ka	LA29B*Modified	10/23/2013	15:49	fgo
Chloride (LA29 3D EXIC)	6,350	mg/kg	LA29B-Mod SESI	12/28/2013	15:47	fgo
Free Alkalinity (Phenyl	7,950	mg/kg	SM 2320B	10/30/2013	12:40	fgo
Total Solids for Dry Wt	90.2	%	SM 2540 G	10/23/2013	16:30	fgo
Solid/Organic Metals Digestion	100/1.37	mL/g	SW-846 3050B	10/25/2013	13:22	fgo
Arsenic	6.17	mg/kg	SW-846 6010B	10/29/2013	12:01	fgo
Cadmium	< 2.50	mg/kg	SW-846 6010B	10/29/2013	12:01	fgo
Calcium (Water Soluble)	117	meq/L	SW-846 6010B	10/29/2013	12:01	fgo
Chromium	17.1	mg/kg	SW-846 6010B	10/29/2013	12:01	fgo
_ead	6.87	mg/kg	SW-846 6010B	10/29/2013	12:01	fgo
Magnesium (Water Soluble)	< 1.00	meq/L	SW-846 6010B	10/29/2013	12:01	fgo
Selenium	< 2.50	mg/kg	SW-846 6010B	10/29/2013	12:01	fgo
Silver	< 2.50	mg/kg	SW-846 6010B	10/29/2013	12:01	fgo
Sodium (Water Soluble)	16.4	meq/L	SW-846 6010B	10/29/2013	12:01	fgo
rue Total Barium	134,000	mg/kg	SW-846 6010B	10/29/2013	12:01	fgo
Zinc	46.4	mg/kg	SW-846 6010B	10/29/2013	12:01	fgo
Mercury	0.160	mg/kg	SW-846 7471A	10/29/2013	14:51	fgo
Solid Metal Digestion Hg	100/0.57	mL/g	SW-846 7471A	10/24/2013	13:30	fgo
Benzene	< 0.156	mg/kg	SW-846 8260B	10/27/2013	17:56	fgo
OC 5035 Extraction	10/10.3	mg/kg	SW-846 8260B	10/25/2013	10:19	fgo
Gulfate	3,900	mg/kg	Tex-620-J	10/29/2013	14:28	fgo
Sulfate Extraction/Leaching	50/5.21	mL/g	Tex-620-J	10/25/2013	15:53	fgo
005 TPH Extraction Solid	10/10.1	mL/g	TNRCC TX 1005	10/25/2013	10:03	fgo
C12 to C28 TPH	97,900	mg/kg	TNRCC TX 1005	10/27/2013	15:55	fgo
C28 to C36 TPH	14,000	mg/kg	TNRCC TX 1005	10/27/2013	15:55	fgo
C6 to C12 TPH	5,160	mg/kg	TNRCC TX 1005	10/27/2013	15:55	fgo
C6 to C36 TPH	117,000	mg/kg	TNRCC TX 1005	10/27/2013	15:55	fgo



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## **Quality Control Data**

Analyte	QC Parameter		Result Units	Reference Value Units				
Chloride	Blank	Method Blank	< 1.0 ppm		100			
	CCV1	Recovery	102 %	True Value	20 ppm			
	CCV2	Recovery	94.6 %	True Value	10 ppm			
	CCV3	Recovery	96.9 %	True Value	10 ppm			
	Dup-A	A Reading	4,940 ppm					
	Dup-B	B Reading	5,180 ppm					
	Dup-RPD1	Relative% Difference	4.65 %					
	LCS	Recovery	97.4 %	Spike Amount	9000 ppm			
	LCSD	Recovery	85.9 %	Spike Amount	9000 ppm			
	LCS-RPD	Relative% Difference	12.5 %					
	MS	Recovery	105 %	Spike Amount	8 ppm			
C6-C12 TPH	Blank	Method Blank	< 50 ppm					
	CCV1	Recovery	96 %	True Value	1000 ppm			
	CCV2	Recovery	108 %	True Value	1000 ppm			
	Dup-A	A Reading	7,480 ppm					
	Dup-B	B Reading	5,310 ppm					
	Dup-RPD1	Relative% Difference	33.9 H %					
	LCS	Recovery	89.8 %	Spike Amount	500 ppm			
	LCSD	Recovery	99.5 %	Spike Amount	500 ppm			
	LCS-RPD	Relative% Difference	10.3 %					
C12-C28 TPH	Blank	Method Blank	< 50 ppm					
	CCV1	Recovery	104 %	True Value	1000 ppm			
	CCV2	Recovery	109 %	True Value	1000 ppm			
	Dup-A	A Reading	127,000 ppm					
	Dup-B	B Reading	114,000 ppm					
	Dup-RPD1	Relative% Difference	10.8 %					
	LCS	Recovery	99.8 %	Spike Amount	500 ppm			
	LCSD	Recovery	102 %	Spike Amount	500 ppm			
	LCS-RPD	Relative% Difference	1.88 %					
Benzene	Blank	Method Blank	< 0.0010 ppm					
	CCV1	Recovery	114 %	True Value	0.02 ppm			
	LCS	Recovery	110 %	Spike Amount	0.02 ppm			
	LCSD	Recovery	110 %	Spike Amount	0.02 ppm			
	LCS-RPD	Relative% Difference	0.818 %	•				
	MS	Recovery	98 %	Spike Amount	0.02 ppm			
	MSD	Recovery	98.5 %	Spike Amount	0.02 ppm			
	MS-RPD	Relative% Difference	0.407 %	•				

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Analyte	QC Parameter		Result	Units	Reference Value		Units
Alkalinity	Dup-A	A Reading	5,950	ppm			
	Dup-B	B Reading	5,940	ppm			
	Dup-RPD1	Relative% Difference	0.0396				
	LCS	Recovery	96	%	Spike Amount	50000	ppm
	LCSD	Recovery	102	%	Spike Amount	50000	ppm
	LCS-RPD	Relative% Difference	6.06	%	·		
Electrical Conductivity	Dup-A(EC)	Reading	21.42	mho/c			
	Dup-B(EC)	Reading	21.29	mho/c			
	Dup-RPD1	Relative% Difference	0.609	%			
	Standard1(EC)	Reading	14.79	mho/c	True Value	14.13	mho/c
	Standard2(EC)	Reading	14.82	mho/c	True Value	14.13	mho/c
SWP	Blank%	Method Blank	< 0.10	%			
	Dup-A%	A Reading	27.6	%			
	Dup-B%	B Reading	26.6	%			
	Dup-RPD1	Relative% Difference	3.81	%			
pH at 25C	Dup-A(pH)	Reading	10.78	SU			
•	Dup-B(pH)	Reading	10.78	SU			
	Dup-RPD1	Relative% Difference	< 0.100	%			
	pH 10 Buffer(1st)		9.99		True Value	10.01	SU
	pH 10 Buffer(2nd)		9.99		True Value	10.01	SU
Sulfate	Blank	Method Blank	< 0.10				
	CCV1	Recovery	102		True Value	40	ppm
	CCV2	Recovery	93.4		True Value		ppm
	CCV3	Recovery	98		True Value		ppm
	Dup-A	A Reading		ppm			FF
	Dup-B	B Reading		ppm			
	Dup-RPD1	Relative% Difference	7.05				
	LCS	Recovery	99.5		Spike Amount	5000	mag
	LCSD	Recovery	108		Spike Amount	5000	
	LCS-RPD	Relative% Difference	8.21				FF
	MS	Recovery	93.1		Spike Amount	8	ppm
Barium, True Total	Blank	Method Blank	< 0.10				
,	CCV2	Recovery	99.3		True Value	10	ppm
	CCV3	Recovery	99.5		True Value		ppm
	Dup-A	A Reading	239,000	ppm			F F · · ·
	Dup-B	B Reading	210,000				
	Dup-RPD1	Relative% Difference	13				
	ICV	Recovery	95.6		True Value	5	ppm
Mercury	Blank	Method Blank	< 0.00020				FF
,	CCV1	Recovery	105		True Value	0.005	ppm
	CCV3	Recovery	107		True Value	0.005	
	LCS	Recovery	99.8		Spike Amount	0.005	
	LCSD	Recovery	99.7		Spike Amount	0.005	• •
	LCS-RPD	Relative% Difference	0.0427		- p.11.0 7 11.10 0111	5.000	F.F
	MS	Recovery	85.6		Spike Amount	0.005	ppm
	MSD	Recovery	97.5		Spike Amount	0.005	
			07.0	, 0	opino / intount	0.000	PPIII

Project: S2704-UT Page 4 of 8 Report: 131023Q003-4



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Analyte	QC Paramete	r	Result Units	Reference Value	Units
Arsenic	Blank	Method Blank	< 2.5 ppm		
	CCV3	Recovery	98.5 %	True Value	10 ppm
	CCV4	Recovery	101 %	True Value	10 ppm
	ICV	Recovery	97.4 %	True Value	5 ppm
	LCS	Recovery	83.8 %	Spike Amount	0.5 ppm
	LCSD	Recovery	90 %	Spike Amount	0.5 ppm
	LCS-RPD	Relative% Difference	7.12 %		
	MS	Recovery	74.9 %	Spike Amount	0.5 ppm
	MSD	Recovery	85 %	Spike Amount	0.5 ppm
	MS-RPD	Relative% Difference	12.7 %		
Ca, water soluble	Blank	Method Blank	< 0.0050 ppm		
	CCV1	Recovery	95.1 %	True Value	100 ppm
	CCV2	Recovery	99.2 %	True Value	100 ppm
	Dup-A	A Reading	4,260 ppm		
	Dup-B	B Reading	4,370 ppm		
	Dup-RPD1	Relative% Difference	2.4 %		
	ICV	Recovery	98.6 %	True Value	50 ppm
Cadmium	Blank	Method Blank	< 2.5 ppm		
	CCV3	Recovery	98.5 %	True Value	5 ppm
	CCV4	Recovery	101 %	True Value	5 ppm
	ICV	Recovery	97.2 %	True Value	2.5 ppm
	LCS	Recovery	87.1 %	Spike Amount	0.25 ppm
	LCSD	Recovery	89.4 %	Spike Amount	0.25 ppm
	LCS-RPD	Relative% Difference	2.59 %		
	MS	Recovery	84.8 %	Spike Amount	0.25 ppm
	MSD	Recovery	86.9 %	Spike Amount	0.25 ppm
	MS-RPD	Relative% Difference	2.49 %	•	
Chromium	Blank	Method Blank	< 2.5 ppm		
	CCV3	Recovery	99.3 %	True Value	10 ppm
	CCV4	Recovery	101 %	True Value	10 ppm
	ICV	Recovery	97.7 %	True Value	5 ppm
	LCS	Recovery	86.7 %	Spike Amount	0.5 ppm
	LCSD	Recovery	92.2 %	Spike Amount	0.5 ppm
	LCS-RPD	Relative% Difference	6.12 %	- P	
	MS	Recovery	81.1 %	Spike Amount	0.5 ppm
	MSD	Recovery	87.7 %	Spike Amount	0.5 ppm
	MS-RPD	Relative% Difference	7.88 %	opino / milouni	
Lead	Blank	Method Blank	< 2.5 ppm		
LCUU	CCV3	Recovery	99 %	True Value	10 ppm
	CCV4	Recovery	101 %	True Value	10 ppm
	ICV	Recovery	97.6 %	True Value	5 ppm
	LCS	Recovery	88.6 %	Spike Amount	0.5 ppm
	LCSD	Recovery	90.9 %	Spike Amount	0.5 ppm
	LCS-RPD	Relative% Difference	2.56 %	opino rimount	о.о ррпп
	MS	Recovery	81.7 %	Spike Amount	0.5 ppm
	MSD	Recovery	80 %	Spike Amount	0.5 ppm
		•		Obike Villouit	о.о ррш
	MS-RPD	Relative% Difference	2.21 %		

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nk V1 V2 -A -b-B -c-RPD1 / nk V1 V2 -A -b-B -c-RPD1 / nk V3 V4 / S SD	Method Blank Recovery Recovery A Reading B Reading Relative% Difference Recovery Method Blank Recovery A Reading B Reading B Reading B Reading Relative% Difference Recovery Method Blank Recovery Method Blank Recovery Recovery	< 0.0050 ppm 99.8 % 99.1 % < 0.500 ppm < 0.500 ppm < 1.00 % 101 % < 1.0 ppm 98 % 99.1 % 408 ppm 409 ppm 0.215 % 100 % < 2.5 ppm 98.4 %	True Value	100 ppm 100 ppm 50 ppm 100 ppm 100 ppm
V2 p-A p-B p-RPD1 / nk V1 V2 p-A p-B p-RPD1 / nk V3 V4 / S	Recovery A Reading B Reading Relative% Difference Recovery Method Blank Recovery A Reading B Reading B Reading Relative% Difference Recovery Method Blank Recovery Method Blank Recovery Recovery	99.1 % < 0.500 ppm < 0.500 ppm < 1.00 % 101 % < 1.0 ppm 98 % 99.1 % 408 ppm 409 ppm 0.215 % 100 % < 2.5 ppm 98.4 %	True Value True Value True Value True Value True Value	100 ppm 50 ppm 100 ppm 100 ppm
o-A o-B o-RPD1 / nk V1 V2 o-A o-B o-RPD1 / nk V3 V4 / S	A Reading B Reading Relative% Difference Recovery Method Blank Recovery A Reading B Reading B Reading Relative% Difference Recovery Method Blank Recovery Recovery	< 0.500 ppm < 0.500 ppm < 1.00 % 101 % < 1.0 ppm 98 % 99.1 % 408 ppm 409 ppm 0.215 % 100 % < 2.5 ppm 98.4 %	True Value True Value True Value True Value	50 ppm 100 ppm 100 ppm 50 ppm
p-B p-RPD1 / nk V1 V2 p-A p-RPD1 / nk V3 V4 / S	B Reading Relative% Difference Recovery Method Blank Recovery A Reading B Reading Relative% Difference Recovery Method Blank Recovery Recovery	< 0.500 ppm < 1.00 % 101 % < 1.0 ppm 98 % 99.1 % 408 ppm 409 ppm 0.215 % 100 % < 2.5 ppm 98.4 %	True Value True Value True Value	100 ppm 100 ppm 50 ppm
o-RPD1 / nk V1 V2 o-A o-B o-RPD1 / nk V3 V4	Relative% Difference Recovery Method Blank Recovery Recovery A Reading B Reading Relative% Difference Recovery Method Blank Recovery Recovery	< 1.00 % 101 % < 1.0 ppm 98 % 99.1 % 408 ppm 409 ppm 0.215 % 100 % < 2.5 ppm 98.4 %	True Value True Value True Value	100 ppm 100 ppm 50 ppm
nk V1 V2 o-A o-B o-RPD1 / nk V3 V4 /	Recovery Method Blank Recovery Recovery A Reading B Reading Relative% Difference Recovery Method Blank Recovery Recovery	101 % < 1.0 ppm 98 % 99.1 % 408 ppm 409 ppm 0.215 % 100 % < 2.5 ppm 98.4 %	True Value True Value True Value	100 ppm 100 ppm 50 ppm
nk V1 V2 o-A o-B o-RPD1 / nk V3 V4 /	Method Blank Recovery Recovery A Reading B Reading Relative% Difference Recovery Method Blank Recovery Recovery	< 1.0 ppm 98 % 99.1 % 408 ppm 409 ppm 0.215 % 100 % < 2.5 ppm 98.4 %	True Value True Value True Value	100 ppm 100 ppm 50 ppm
V1 V2 o-A o-B o-RPD1 / nk V3 V4 /	Recovery Recovery A Reading B Reading Relative% Difference Recovery Method Blank Recovery Recovery	98 % 99.1 % 408 ppm 409 ppm 0.215 % 100 % < 2.5 ppm 98.4 %	True Value True Value	100 ppm
V2 o-A o-B o-RPD1 / nk V3 V4 /	Recovery A Reading B Reading Relative% Difference Recovery Method Blank Recovery Recovery	99.1 % 408 ppm 409 ppm 0.215 % 100 % < 2.5 ppm 98.4 %	True Value True Value	100 ppm
o-A o-RPD1 / nk V3 V4 /	A Reading B Reading Relative% Difference Recovery Method Blank Recovery Recovery	408 ppm 409 ppm 0.215 % 100 % < 2.5 ppm 98.4 %	True Value	50 ppm
o-B o-RPD1 / nk V3 V4 /	B Reading Relative% Difference Recovery Method Blank Recovery Recovery	409 ppm 0.215 % 100 % < 2.5 ppm 98.4 %		
o-RPD1 / nk V3 V4 /	Relative% Difference Recovery Method Blank Recovery Recovery	0.215 % 100 % < 2.5 ppm 98.4 %		
/ nk V3 V4 /	Recovery Method Blank Recovery Recovery	100 % < 2.5 ppm 98.4 %		
nk V3 V4 7	Method Blank Recovery Recovery	< 2.5 ppm 98.4 %		
V3 V4 S	Recovery Recovery	98.4 %	True Value	10 nnm
V4 '	Recovery		True Value	10 nnm
, S	•	104.0/		10 ppm
6	Recovery	101 %	True Value	10 ppm
		99.5 %	True Value	5 ppm
SD	Recovery	85 %	Spike Amount	0.5 ppm
	Recovery	90.3 %	Spike Amount	0.5 ppm
S-RPD	Relative% Difference	6.05 %		• • •
	Recovery	80.1 %	Spike Amount	0.5 ppm
D	Recovery	88.5 %	Spike Amount	0.5 ppm
- -RPD	Relative% Difference	9.96 %		
nk	Method Blank	< 2.5 ppm		
V3	Recovery	99.7 %	True Value	2 ppm
V4	Recovery	102 %	True Value	2 ppm
,	Recovery	102 %	True Value	1 ppm
3	Recovery	90.6 %	Spike Amount	0.1 ppm
SD	Recovery	92.8 %	Spike Amount	0.1 ppm
S-RPD	Relative% Difference	2.47 %	opino / milouni	от ррт
	Recovery	99.8 %	Spike Amount	0.1 ppm
D	Recovery	103 %	Spike Amount	0.1 ppm
	•		opino / unodin	о рр
		• • • • • • • • • • • • • • • • • • • •	True Value	10 ppm
	•			10 ppm
				5 ppm
	<del>-</del>			0.5 ppm
	•		·	0.5 ppm
	-		Spike Amount	о.э ррш
5-KFD			Snika Amount	0.5.000
n	•			0.5 ppm
	•		Spike Amount	0.5 ppm
-H%	•			
D0/	<u>-</u>			
	-RPD hk v/3 v/4 GG G-RPD D-RPD hk% h-A% h-B%	nk Method Blank V3 Recovery V4 Recovery Recovery S Recovery S Recovery Recovery PARPD Relative% Difference Recovery Recovery Recovery Redulive% Difference Recovery ARPD Relative% Difference Method Blank A Reading Reduling Reduling Reduling	nk         Method Blank         < 2.5 ppm           v/3         Recovery         98.7 %           v/4         Recovery         101 %           Recovery         97.5 %           6         Recovery         85.9 %           BD         Recovery         89.4 %           8-RPD         Relative% Difference         3.98 %           Recovery         91 %           D         Recovery         95.5 %           RPD         Relative% Difference         4.89 %           nk%         Method Blank         < 0.10 %	nk Method Blank < 2.5 ppm  V3 Recovery 98.7 % True Value  V4 Recovery 101 % True Value  Recovery 97.5 % True Value  S Recovery 85.9 % Spike Amount  S Recovery 89.4 % Spike Amount  S Recovery 91 % Spike Amount  Recovery 91 % Spike Amount  Recovery 95.5 % Spike Amount  Recovery 95.5 % Spike Amount  RepD Relative% Difference 4.89 %  Recovery 95.5 % Spike Amount  RRPD Relative% Difference 4.89 %  RRPD Relative% Difference 8.8 %  RRPD Relative% Blank 8.4 %

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Approved by	Drag Oliver	
	Greg Oliver, Lab Manager	

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GCO Labs, LLC 3505 West Loop 281 Longview, Texas 75604 903 / 291-0137 www.gco-labs.com

Laboratory Approved by the Texas Railroad Commission Address: P.O. Box 6215 J. B. Scott 1063/13/14.50 Detra Washington Company: Scott Environmental Services 134023 1 003 WOBC-A 131023 Q CO POBC-A Lab Use Only Longview Relinquished by: 3505 W. Loop 281 Longview, Texas 75604 Field identification State: Texas Printed Name 5. E Date 14 PM 0 Chain of Custody Billing Address (if different): 1204 Name Cocasion 5 2 704- UT Shope. Matrix #Bottles P.PS 2 Linda Cross PG Number: ZIp: greg.oliver@gco-labs.com (903)291-0137 (903)452-1929 Routine Salinety Benzore TEEQ 1005 Analysis Request LAZAB METELS visit us at www.gco-labs.com

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Form 3160-4 (March 2012)

# UNITED STATES DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT

FORM APPROVED OMB NO. 1004-0137 Expires: October 31, 2014

	WEL	T CO	/PLETIC	ON OR R	ECOMPLETI	ON	REPORT A	ND L	OG				H6262		
a. Type of W	ell	<b>✓</b> Oil W	ell 🔲	Gas Well	Dry C	ther								Allottee or Tri	ibe Name
b. Type of Co	ompletion:	New V	Well	Work Over	Deepen P	lug E	Back Diff.	Resvr.,				/		Agreement	Name and No.
2. Name of O NEWFIELD	perator													ne and Well N	
NEWFIELD  3. Address R			DMPANY				3a. Phone N	o. (incl	ude are	a code)		9. AI	I Well	No.	-2.4411
N	IYTON, UT 84	052		• • • • • • • • • • • • • • • • • • • •	constitution		Ph:435-64	6-372	1				13-520 ield and	Pool or Expl	loratory
4. Location o	f Well (Repo	ort locatio	n clearly a	nd in accord	lance with Federal	requi	rements).					UND	ESIGN	IATED	
At surface	276' FNL	1452' FV	VL (NE/N	W) SEC 16	3 T3S R2W							11. S S	ec., T., i	R., M., on Blo r Area	ock and 6 T3S R2W Mer UBM
At top prod	i. interval rep	orted belo	ow 405' F	SL 711' F\	WL (SW/SW) SE	C 9	T3S R2W					12. 0	County o	r Parish	13. State
At total dep	231' FN				4 T3S R2W								HESN		UT
14. Date Spu	dded		15. Date 07/28/2	T.D. Reache	d		16. Date Comp	leted C	)9/03/2 Ready t	2014 o Prod.				ns (DF, RKB 5283' KB	B, RT, GL)*
04/13/2014 18. Total Dep	pth: MD	19310'					9,261'				dge Plug		MD IVD		
21. Type Ele	ctric & Other	10,605' Mechanic	al Logs Rur	(Submit co	py of each)	/D			Carrier III	Vas well		Z N	0 🗖	Yes (Submit	analysis)
DUAL IND	GRD, SP,	COMP.	NEUTRO	N, GR, CA	LIPER, CMT BC	ND				Vas DST Direction	'run? al Survey			Yes (Submit Yes (Submit	copy)
23. Casing a	and Liner Re	cord (Rej	oort all strir	igs set in we	ll)	I c	tage Cementer	No	of Sks	R. T	Slurr	Vol.			
Hole Size	Size/Grad	e Wt.	(#/ft.)	Top (MD)	Bottom (MD)	3	Depth Depth	Туре	of Ce	ment	(BI		Cem	ent Top*	Amount Pulled
19.5"	13-3/8" J-	_			1642'	1			CLAS	_			-		
12-5/8"	9-5/8" N-8	_	0'		8420' 19304'	-			CLAS	_		_	_	- +	
8-7/8"	5-1/2" P-1	110 20	- 0		19304			4001	02710						
24. Tubing Size	Record Depth Se	t (MD)	Packer De	epth (MD)	Size	D	Depth Set (MD)	Packer	Depth	(MD)	Si	ze	Dept	th Set (MD)	Packer Depth (MD)
2-7/8"	EOT@		XN@8670												
25. Produci	ng Intervals Formation			Тор	Bottom	26.	Perforation Perforated In			1 1	Size	No.	Holes		Perf. Status
A) UTELA			9370		18979'	93	370' - 18979' N	1D		0.38		1032			
B) UTELA	ND BUTTE		1912	9'	19131'	19	9129' - 19131'	MD_		-		-		SLIDING	SLEEVE
C)						+				-		-		<del> </del>	
D)	racture, Trea	tment Ce	ment Squee	ze etc											
Z1. Acid, I	Depth Interv	al				_		Amoun	t and T	ype of l	Material				
9370' - 18	979' MD		Frac	w/ 4,224,3	63#s of proppar	t sai	nd in 97,171 b	bls of	clean	fluia, ir	1 44 Sta	iges.			
						_									
	tion - Interva		br	lo:1	Gas	Vater	r Oil Gra	wity	k	ias	Pro	duction I	Method		
Date First Produced	Test Date	Hours Tested	Test Production	Oil BBL		BBL.				iravity					
9/3/2014	9/13/14	24	-	795		857						AS LIFT			
Choke	Tbg. Press.		24 Hr. Rate	Oil BBL		Water 3BL		1	V	Vell Sta	tus				
Size	Flwg. SI	Press.	Kate	BBL	, and				Į.	PROD	JCING				
20. Brodu	ction - Interv	nl B				_									
Date First		Hours	Test	Oil		Wate		_		Gas Gravity	Pr	oduction	Method		·
Produced		Tested	Production	on BBL	MCF	BBL	Con. A	API	ſ	Jiavity					
Choke	Tbg. Press.	Csg.	24 Hr.	Oil		Wate		il		Well Sta	tus				
Size	Flwg.	Press.	Rate	BBL	MCF	BBL	Ratio								
			<b></b>												
*(See ins	tructions and	spaces for	or additiona	l data on pag	ge 2)										

Sundry Number: 56494 API Well Number: 43013520790000 28b. Production - Interval C Production Method Oil Gravity Date First Test Date Hours Test Oil Gas Water Gas Produced Production BBL MCF BBL Corr. API Gravity Tested Gas/Oil Well Status Choke Tbg. Press 24 Hr. Oil Gas Water Csg. Size BBL MCF BBL Ratio Flwg. Press. Rate 28c. Production - Interval D Production Method Date First Test Date Water Oil Gravity Gas Hours Test MCF BBL Gravity Produced **Tested** Production BBL Corr. API Gas Choke Tbg. Press. 24 Hr. Oil Water Gas/Oil Well Status Csg. Size Rate BBLMCF BBL Ratio Flwg. ress. SI 29. Disposition of Gas (Solid, used for fuel, vented, etc.) 31. Formation (Log) Markers 30. Summary of Porous Zones (Include Aquifers): **GEOLOGICAL MARKERS** Show all important zones of porosity and contents thereof: Cored intervals and all drill-stem tests, including depth interval tested, cushion used, time tool open, flowing and shut-in pressures and recoveries. Top Bottom Descriptions, Contents, etc. Name Formation Top Meas. Depth GARDEN GULCH MARK 6437 **GARDEN GULCH 2** 6851 DOUGLAS CREEK 7523 CASTLE PEAK 8438 BASAL CARB 8758 32. Additional remarks (include plugging procedure): Bottom Producing Interval: 324' FNL 532' FWL (NW/NW) SEC 4 T3S R2W 33. Indicate which items have been attached by placing a check in the appropriate boxes:

34. I hereby certify that the foregoing and attached information is complete and correct as determined from all available records (see attached instructions)\*

Name (please print) Heather Calder

Title Regulatory Technician

Date 10/07/2014

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any

☐ DST Report

Other: Drilling daily activity

✓ Directional Survey

Geologic Report

Core Analysis

☐ Electrical/Mechanical Logs (1 full set req'd.)☐ Sundry Notice for plugging and cement verification

false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

(Continued on page 3) (Form 3160-4, page 2)

NEWF	FIELD					Direct	ional S	urvey					
Legal Well Nam Ute Tribal 13		/H					Wellbor	e Name al Hole					
4301352079	90000	Surface L NENW	egal Location 276FNI 14	152FWL Se	c16 T3S D	2\\/ Morl I	Field Name	B - UTELAN	ND BUTTE	Well Type	out to take	Wel	Configuration Type
Well RC 500353248			County Duchesne	1021 112 00	S	tate/Province	JOINTAC		Spud Date	BEST SAME OF A SO		Final Rig Rela	rizontal ease Date
Actual Deviation	Survey		Ibore Name	Parent Wei		Jtah			5/24 VS Dir (	1/2014 08:0		7/	28/2014 18:00
Actual, Prop	osed? No		ginal Hole	itive?		rilling - Orig			VS DIF	<i>a</i>	Profile Type Horizontal		Kick Off Depth (ftK 8,42
	4/17/20			ECHECOS	No		Descripti Actual	on			Proposed?		No
MD Tie In (ftKB)		TVDTie I	in (ftKB)	In	clination Tie In	(")	Azimuth	Tie In (*)	,	NSTie In (ft)		EWTie	
Survey Data	a	r											(A
7/11/2014	MD (ftKB)	Incl (*)	Azm (*)	TVD (ftKB)	VS (ft)	NS (ft)	EW (ft)	DLS (°/100ft)	Build (°/100ft)	Turn (°/100ft)	Unwrap Displace (ft)	Method	Survey Company
4/17/2014	102	0.00	0.00 148.34	102	0	0	0	0.00	0.00	0.00	0.00		Weatherford
4/17/2014	131	0.57	152.65	131	-1	-1	0	0.47	0.47	145.43 14.86	0.43	MWD	Pay Zone
4/17/2014	159	0.57	138.67	159	-1	-1	1	0.50	0.00	-49.93	0.09		Pay Zone Pay Zone
4/17/2014	186	0.44	131,16	186	-1	-1	1	0.54	-0.48	-27.81	1.21	MWD	Pay Zone
4/17/2014	214 232	0.26	166.71 190.22	214	-1	-1	1	0.98	-0.64	126.96	1.37	7 - 2 - 2 - 2 - 2 - 2 - 2 - 2 - 2 - 2 -	Pay Zone
4/17/2014	269	0.31	190.22	232 269	-1 -2	-1 -2	1	0.70 1.06	0.28	130.61		MWD	Pay Zone
4/17/2014	298	0.57	173.26	298	-2	-2	1	0.96	1.05 -0.45	14.62 -77.14		MWD	Pay Zone
4/17/2014	324	0.62	182.09	324	-2	-2	1	0.40	0.19	33.96	2.10	MWD	Pay Zone Pay Zone
4/17/2014	353	0.75	191.93	353	-2	-2	1	0.60	0.45	33.93	2.71	MWD	Pay Zone
4/17/2014	383 415	0.75	188.86 218.04	383 415	-3	-3	1	0.13	0.00	-10.23	3.11	MWD	Pay Zone
4/17/2014	445	1.01	205.56	445	-3 -4	-3 -4	0	0.76	0.53	91.19	3.56	CATALOGICA.	Pay Zone
4/17/2014	475	1.45	196.77	475	-4	-4	0	1.59	1.47	-29.30		MWD	Pay Zone Pay Zone
4/17/2014	505	1.71	200.63	505	-5	-5	0	0.94	0.87	12.87	5.53		Pay Zone
4/17/2014 4/17/2014	535 565	1.36	202.04	535	-6	-6	-1	1.17	-1,17	4.70	6.33	MWD	Pay Zone
4/17/2014	595	1.71	195.89 200.00	565 595	-7 -7	-7	-1	1.29	1.17	-20.50		MWD	Pay Zone
4/17/2014	625	2.15	201.43	625	-7 -8	-7 -8	-1 -2	0.41 1.48	0.00	13.70 4.77		MWD	Pay Zone
4/17/2014	655	2.37	207.56	655	-9	-9	-2	1.09	0.73	20.43		MWD	Pay Zone Pay Zone
4/17/2014	685	2.59	221.55	685	-10	-10	-3	2.14	0.73	46.63	11.51	MWD	Pay Zone
4/17/2014	715 745	2.86 3.08	226.83	715	-12	-12	-4	1.23	0.90	17.60	12.93	MWD	Pay Zone
4/17/2014	775	3.30	230.21 240.10	745 775	-13 -13	-13	-5	0.94	0.73	11.27		MWD	Pay Zone
4/17/2014	805	3.69	248.10	805	-13	-13 -14	-6 -8	1.97 2.08	0.73 1.30	32.97 26.67		MWD	Pay Zone
4/17/2014	835	4.00	254.78	835	-15	-15	-10	1.81	1.03	22.27		MWD	Pay Zone Pay Zone
4/17/2014	865	4.40	265.19	865	-15	-15	-12	2.86	1.33	34.70	22.17		Pay Zone
4/17/2014	895 925	4.26 3.87	269.80	894	-15	-15	-14	1.25	-0.47	15.37	24.44	MWD	Pay Zone
4/17/2014	955	3.34	269.50 270.29	924 954	-15 -15	-15 -15	-16	1.30	-1.30	-1.00	26.56		Pay Zone
4/17/2014	985	3.03	268.66	984	-15	-15	-18 -20	1.77	-1.77 -1.03	2.63 -5.43	28.45 30.11		Pay Zone
4/17/2014	1,015	3.08	268.66	1,014	-15	-15	-22	0.17	0.17	0.00		MWD	Pay Zone Pay Zone
4/17/2014	1,045	2.99	272.71	1,044	-15	-15	-23	0.77	-0.30	13.50	33.30		Pay Zone
4/17/2014	1,075	3.30	273.72 276.02	1,074	-15	-15	-25	1.05	1.03	3.37	34.95	MWD	Pay Zone
4/18/2014	1,135	3.47	273.67	1,104 1,134	-15 -15	-15 -15	-26 -28	0.57	-0.37	7.67	36.64		Pay Zone
4/18/2014	1,165	3.65	268.05	1,164	-15	-15	-30	1.04	0.93	-7.83 -18.73	38.39 40.25		Pay Zone
4/18/2014	1,195	3.69	268.80	1,194	-15	-15	-32	0.21	0.13	2.50		MWD	Pay Zone Pay Zone
4/18/2014	1,225	4.09	271.17	1,224	-15	-15	-34	1.44	1.33	7.90	44.20		Pay Zone
4/18/2014 4/18/2014	1,255 1,285	4.30	268.62 267.40	1,254 1,284	-15	-15	-36	0.94	0.70	-8.50	46.40		Pay Zone
4/18/2014	1,315	4.80	265.37	1,314	-15 -15	-15 -15	-39 -41	1.70 0.57	1.67	-4.07	48.78		Pay Zone
4/18/2014	1,345	4.53	262.51	1,343	-15	-16	-44	1.19	-0.90	-6.77 -9.53	51.29 53.73		Pay Zone
4/18/2014	1,375	4.22	261.17	1,373	-16	-16	-46	1.09	-1.03	-4.47	56.01		Pay Zone Pay Zone
4/18/2014	1,405	3.47	264.75	1,403	-16	-16	-48	2.62	-2.50	11.93	58.02		Pay Zone
4/18/2014 4/18/2014	1,435	3.25	265.41	1,433	-16	-16	-50	0.74	-0.73	2.20	59.78	MWD	Pay Zone
4/19/2014	1,495	3.08	260.89	1,463	-16 -17	-17 -17	-51	1.01	-0.57	-15.07	61.44		Pay Zone
www.newfie			_51.51	.,	-11	-1/	-53	1.74	1.73	3.07	63.19	MWD	Pay Zone

# NEWFIELD

#### **Directional Survey**

500353248		D	uchesne		U	tah			5/24	/2014 08:0	0	7/28/2014 18:00		
Survey Date							-							
Date	MD (ftKB)	fa el (9)	4 (0)	T (D (0)(D)	110.40	110.101			Build	Turn	Unwrap			
4/19/2014	1,525	Incl (°) 3.56	Azm (°) 263.79	TVD (ftKB) 1,523	VS (ft) -17	NS (ft)	EW (ft) -55	DLS (°/100ft) 0.43	(°/100ft) -0.13	(°/100ft) 6.60	Displace (ft)	Method MWD	Survey Company	
4/19/2014	1,545	3.69	262.92	1,543	-17	-17	-56	0.43	0.65	-4.35		MWD	Pay Zone	
4/19/2014	1,577	3.87	261.30	1,575	-17	-17	-58	0.65	0.56	-5.06		MWD	Pay Zone	
4/19/2014	1,761	5.42	266.55	1,758	-19	-19	-73	0.87	0.84	2.85		MWD	Pay Zone	
4/19/2014	1,856	5.26	264.62	1,853	-19	-20	-73	0.87		-2.03		MWD	Weatherford	
4/19/2014	1,951	5.33	259.70	1,948	-21	-20	-90	0.23	0.07	-2.03	100.92		Weatherford	
4/19/2014	2,046	5.35	256.56	2,042	-22	-21	-99	0.46	0.07	-3.16	100.92		Weatherford	
4/19/2014	2,141	5.60	266.55	2,137	-24	-23	-108	1.04					Weatherford	
4/19/2014	2,235	5.78	264.98	2,137	-24	-24			0.26	10.52	118.78		Weatherford	
4/19/2014	2,330	5.66	263.49	2,325	-24	-26	-117 -127	0.25	0.19	-1.67	128.10		Weatherford	
4/19/2014	2,425	7.41	267.95	2,323	-26	-26		0.20	-0.13	-1.57	137.57		Weatherford	
4/19/2014	2,519	7.55	268.04				-138	1.92	1.84	4.69	148.37		Weatherford	
4/19/2014	2,614	7.54	266.65	2,512	-26	-27	-150	0.15	0.15	0.10	160.61		Weatherford	
4/19/2014	2,709	7.54	265.64	2,607	-27	-27	-162	0.19	-0.01	-1.46	173.08		Weatherford	
4/19/2014	2,803	7.21	264.61	2,701	-28	-28	-174	0.37	-0.35	-1.06	185.28		Weatherford	
4/19/2014	2,898	6.99	263.62	2,794	-29	-29	-186	0.15	0.06	-1.10	197.12		Weatherford	
4/19/2014				2,888	-30	-30	-198	0.32	-0.29	-1.04	208.92		Weatherford	
	2,993	6.85	263.18	2,983	-31	-32	-209	0.16		-0.46	220.36		Weatherford	
4/19/2014	3,088	6.75	262.32	3,077	-33	-33	-220	0.15		-0.91	231.61		Weatherford	
4/19/2014	3,183	6.59	261.48	3,171	-34	-35	-231	0.20	-0.17	-0.88	242.64		Weatherford	
4/19/2014	3,278	6.26	260.38	3,266	-36	-36	-242	0.37	-0.35	-1.16	253.27		Weatherford	
4/19/2014	3,372	6.03	258.73	3,359	-38	-38	-252	0.31	-0.24	-1.76	263.33		Weatherford	
4/19/2014	3,467	5.72	257.83	3,454	-40	-40	-261	0.34	-0.33	-0.95	273.06		Weatherford	
5/25/2014	3,562	6.11	261.27	3,548	-41	-42	-271	0.55	0.41	3.62	282,84		Weatherford	
5/25/2014	3,657	5.72	261.07	3,643	-43	-43	-281	0.41	-0.41	-0.21	292.63	MWD	Weatherford	
5/25/2014	3,752	5.28	257.67	3,737	-44	-45	-290	0.58	-0.46	-3.58	301.74	MWD	Weatherford	
5/25/2014	3,846	5.99	260.24	3,831	-46	-47	-299	0.80	0.76	2.73	310.96		Weatherford	
5/25/2014	3,941	5.63	258.34	3,925	-48	-49	-308	0.43	-0.38	-2.00	320.58	MWD	Weatherford	
5/25/2014	4,036	5.46	255.06	4,020	-50	-51	-317	0.38	-0.18	-3.45	329.75	MWD	Weatherford	
5/25/2014	4,131	5.97	258.93	4,114	-52	-53	-326	0.67	0.54	4.07	339.21	MWD	Weatherford	
5/25/2014	4,226	6.09	263.09	4,209	-54	-54	-336	0.48	0.13	4.38	349.18	MWD	Weatherford	
5/25/2014	4,321	5.50	260.34	4,303	-55	-56	-346	0.69	-0.62	-2.89	358.77	MWD	Weatherford	
5/25/2014	4,416	5.17	257.81	4,398	-57	-57	-354	0.43	-0.35	-2.66	367.60	MWD	Weatherford	
5/25/2014	4,510	6.36	258.04	4,491	-59	-59	-363	1.27	1.27	0.24	377.04	MWD	Weatherford	
5/25/2014	4,605	6.28	255.31	4,586	-61	-62	-374	0.33	-0.08	-2.87	387.50	MWD	Weatherford	
5/25/2014	4,700	5.59	250.43	4,680	-64	-65	-383	0.90	-0.73	-5,14	397.31	THE RESERVE OF THE PARTY OF THE	Weatherford	
5/25/2014	4,794	6.89	259.25	4,774	-66	-67	-393	1.71	1.38	9.38	407.50	MWD	Weatherford	
5/25/2014	4,888	6.55	258.20	4,867	-69	-69	-404	0.38	-0.36	-1.12	418.50		Weatherford	
5/25/2014	4,983	6.07	255.76	4,962	-71	-72	-414	0.58	-0.51	-2.57	428.94	MWD	Weatherford	
5/25/2014	5,078	5.44	250.59	5,056	-74	-74	-423	0.86	-0.66	-5.44	438.45	MWD	Weatherford	
5/25/2014	5,172	6.36	257.36	5,150	-76	-77	-432	1.23	0.98	7.20	448.10	MWD	Weatherford	
5/25/2014	5,267	7.00	267.31	5,244	-78	-78	-443	1.39	0.67	10.47	459.11	MWD	Weatherford	
5/25/2014	5,362	5.48	267.95	5,338	-78	-79	-453	1.60	-1.60	0.67	469.44	MWD	Weatherford	
5/25/2014	5,457	6.03	262.80	5,433	-79	-80	-463	0.79	0.58	-5.42	478.95	MWD	Weatherford	
5/25/2014	5,552	6.85	262.77	5,527	-80	-81	-473	0.86	0.86	-0.03	489.61	MWD	Weatherford	
5/25/2014	5,650	6.59	261.99	5,625	-82	-83	-485	0.28	-0.27	-0.80	501.08	MWD	Weatherford	
5/25/2014	5,745	6.60	257.85	5,719	-83	-84	-496	0.50	0.01	-4.36	511.98	MWD	Weatherford	
5/25/2014	5,839	6.21	249.93	5,812	-86	-87	-506	1.03	-0.41	-8.43	522.44	MWD	Weatherford	
5/25/2014	5,933	6.21	270.19	5,906	-88	-89	-515	2.32	0.00	21.55	532.45		Weatherford	
5/25/2014	6,028	5.96	267.48	6,000	-88	-89	-526	0.40	-0.26	-2.85	542.52		Weatherford	
5/25/2014	6,123	5.94	262.21	6,095	-89	-90	-535	0.58	-0.02	-5.55	552.36		Weatherford	
5/25/2014	6,217	6.12	257.65	6,188	-91	-92	-545	0.54	0.19	-4.85	562.22		Weatherford	
5/25/2014	6,312	5.87	253.82	6,283	-93	-94	-555	0.50	-0.26	-4.03	572.14		Weatherford	
5/25/2014	6,407	5.69	246.26	6,377	-96	-98	-564	0.82	-0.19	-7.96	581.69		Weatherford	
										7,757,684	42/ 2010-2010	, which there	The succession of the	
www.newfie	eld.com													



#### **Directional Survey**

Survey Data	=	-							, .	72014 00.0		-	0/2014 16:00
Survey Dam									Build	Turn	Unwrap		
Date	MD (ftKB)	Incl (°)	Azm (°)	TVD (ftKB)	VS (ft)	NS (ft)	EW (ft)	DLS (°/100ft)	(°/100ft)	(°/100ft)	Displace (ft)	Method	Survey Company
5/25/2014	6,501	6.27	253.25	6,471	-100	-101	-573	0.99	0.62	7.44	591.46		Weatherford
5/25/2014	6,596	6.50	264.73	6,565	-102	-103	-583	1.36	0.24	12.08	601.97	MWD	Weatherford
5/25/2014	6,691	5.93	261.91	6,660	-103	-104	-593	0.68	-0.60	-2.97			Weatherford
5/25/2014	6,786	5.84	255.94	6,754	-105	-106	-603	0.65	-0.09	-6.28	621.98		Weatherford
5/25/2014	6,881	5.38	265.90	6,849	-106	-107	-612	1.13	-0.48	10.48	631.23	MWD	Weatherford
5/25/2014	6,976	4.88	261.66	6,943	-107	-108	-620	0.66	-0.53	-4.46	639.72		Weatherford
5/25/2014	7,070	5.88	263.96	7,037	-108	-109	-629	1.09	1.06	2.45	648.53	MWD	Weatherford
5/25/2014	7,165	5.21	257.12	7,131	-110	-111	-638	0.99	-0.71	-7.20	657.70	MWD	Weatherford
5/25/2014	7,260	4.56	250.19	7,226	-112	-113	-646	0.92	-0.68	-7.29	665.77	MWD	Weatherford
5/25/2014	7,355	4.45	256.02	7,321	-114	-115	-653	0.50	-0.12	6.14	673.23	MWD	Weatherford
5/25/2014	7,450	6.02	259.26	7,415	-116	-117	-662	1.68	1.65	3.41	681.89	MWD	Weatherford
5/25/2014	7,545	5.42	257.39	7,510	-118	-119	-671	0.66	-0.63	-1.97	691.36	MWD	Weatherford
5/25/2014	7,640	5.86	262.42	7,604	-119	-121	-680	0.70	0.46	5.29	700.68	MWD	Weatherford
5/25/2014	7,735	6.15	265.37	7,699	-120	-122	-690	0.45	0.31	3.11	710.62	MWD	Weatherford
5/25/2014	7,830	7.13	275.84	7,793	-120	-122	-701	1.64	1.03	11.02	721.56	MWD	Weatherford
5/25/2014	7,924	9.55	293.90	7,886	-116	-118	-714	3.76	2.57	19.21	735.03		Weatherford
5/25/2014	8,019	12.59	307.27	7,980	-107	-108	-729	4.17	3.20	14.07	753.15		Weatherford
5/25/2014	8,114	14.78	321.74	8,072	-91	-93	-745	4.26	2.31	15.23	775.45		Weatherford
5/25/2014	8,168	14.63	328.84	8,124	-80	-81	-753	3.35	-0.28	13.15	789.13		Weatherford
5/25/2014	8,209	14.50	328.22	8,164	-71	-72	-758	0.50	-0.32	-1.51	799.44		Weatherford
5/25/2014	8,303	17.29	339.04	8,254	-48	-49	-769	4.32	2.97	11.51	825.08		Weatherford
5/25/2014	8,368	18.64	350.22	8,316	-29	-30	-775	5.69	2.08	17.20	845.04		
7/7/2014	8,503	18.97	0.59	8,444	15	13	-778	2.49	0.24	-258.99			Weatherford
7/7/2014	8,535	21.29	5.26	8,474	26	24	-778	8.81	7.25	14.59	888.39		Weatherford
7/7/2014	8,566	23.21	7.43	8,503	37	36					899.39		Weatherford
7/7/2014	8,598	24.95	8.10	8,532	50		-776	6.74	6.19	7.00	911.13		Weatherford
7/7/2014	8,630	27.91	8.00			49	-774	5.50	5.44	2.09			Weatherford
7/7/2014	8,661		7.68	8,561	64	63	-772	9.25	9.25	-0.31			Weatherford
		31.41		8,587	79	78	-770	11.30	11.29	-1.03	953.76		Weatherford
7/7/2014	8,691	34.44	7.90	8,613	96	94	-768	10.11	10.10	0.73	970.07		Weatherford
7/7/2014	8,725	38.04	8.01	8,640	115	114	-765	10.59	10.59	0.32	990.16		Weatherford
7/8/2014	8,756	41.60	7.29	8,664	135	134	-763	11.58	11.48	-2.32		MWD	Weatherford
7/8/2014	8,786	44.65	5.99	8,686	156	154	-760	10.59	10.17	-4.33			Weatherford
7/8/2014	8,820	47.90	5.18	8,709	180	178	-758	9.71	9.56	-2.38	1,055.08		Weatherford
7/8/2014	8,851	51.15	5.36	8,729	203	202	-756	10.49	10.48	0.58	1,078.66	MWD	Weatherford
7/8/2014	8,881	54.65	5.62	8,747	227	226	-754	11.69	11.67	0.87	1,102.59	MWD	Weatherford
7/8/2014	8,914	58.18	5.38	8,766	255	253	-751	10,71	10.70	-0.73	1,130.07	MWD	Weatherford
7/8/2014	8,946	61.31	4.51	8,782	282	281	-748	10.06	9.78	-2.72	1,157.71	MWD	Weatherford
7/8/2014	8,976	64.79	3.70	8,795	309	307	-747	11.85	11.60	-2.70	1,184.45	MWD	Weatherford
7/8/2014	9,009	68.54	2.97	8,809	339	338	-745	11.54	11.36	-2.21	1,214.74	MWD	Weatherford
7/8/2014	9,041	72.07	2.11	8,819	369	368	-743	11.32	11.03	-2.69			Weatherford
7/8/2014	9,071	75.28	1.13	8,828	398	396	-743	11.15	10.70	-3.27	1,273.65	MWD	Weatherford
7/8/2014	9,104	78.28	0.08	8,835	430	429	-742	9.60	9.09	-3.18			Weatherford
7/8/2014	9,136	81.90	359.15	8,841	462	460	-743	11.67	11.31	1122.09	1,337.29		Weatherford
7/8/2014	9,167	85.62	0.04	8,844	492	491	-743	12.33	12.00	-1158.42	1,368.10	Contract of the Contract of th	Weatherford
7/8/2014	9,199	87.53	0.62	8,846	524	523	-743	6.24	5.97	1.81	1,400.04		Weatherford
7/8/2014	9,262	86.92	0.24	8,849	587	586	-742	1,14	-0.97	-0.60	1,462.97		Weatherford
7/8/2014	9,357	89.69	0.89	8,852	682	681	-741	2.99	2.92	0.68	1,557.92		Weatherford
7/9/2014	9,452	85.74	359.07	8,856	777	776	-741	4.58	-4.16	377.03	1,652.82		Weatherford
7/9/2014	9,547	87.60	0.17	8,861	872	870	-741	2.27	1.96	-377.79	1,747.65		
7/9/2014	9,641	87.04	359.36	8,866	966	964	-742						Weatherford
7/9/2014	9,736	86.05	354.85	8,871			100000	1.05	-0.60	382.12	1,841.55		Weatherford
7/9/2014		12%			1,060	1,059	-747	4.85	-1.04	-4.75	1,936.35		Weatherford
7/9/2014	9,831 9,926	85.81 84.56	354.42	8,878	1,155	1,153	-756	0.52	-0.25	-0.45			Weatherford
	u u26 l	8/1.56	355.18	8,886	1,249	1,248	-764	1.54	-1.32	0.80	2,125.77	LEAVAGES	Weatherford



#### **Directional Survey**

500353248		D	uchesne		U	tah			5/24	/2014 08:0	0	7/28/2014 18:00		
Survey Data	ì -							10						
Date	MD (ftKB)	Incl (°)	Azm (°)	TVD (BVD)	VC (6)	NC /A	EM (A)	DI C (9/1009)	Build	Turn	Unwrap	Malhad		
7/9/2014	10,021	87.97	358.36	TVD (ftKB) 8,892	VS (ft) 1,344	NS (ft) 1,342	EW (ft) -770	DLS (°/100ft) 4.90	(°/100ft) 3.59	(°/100ft) 3.35	Displace (ft) 2,220.54	Method	Survey Company Weatherford	
7/9/2014	10,115	85.25	356.51	8,898	1,438	1,436	-774	3.50	-2.89	-1.97	2,314.37		Weatherford	
7/10/2014	10,210	87.16	358.97	8,904	1,532	1,531	-778	3.27	2.01	2.59	2,409.15		Weatherford	
7/10/2014	10,305	87.04	359.03	8,909	1,627	1,626	-779	0.14	-0.13	0.06	2,504.02		Weatherford	
7/10/2014	10,400	87.16	0.39	8,914	1,722	1,720	-780	1.44	0.13	-377.52	2,598.90		Weatherford	
7/10/2014	10,495	87.35	354.18	8,918	1,817	1,815	-784	6.53	0.20	372.41	2,693.74		Weatherford	
7/10/2014	10,589	87.04	352.81	8,923	1,910	1,908	-795	1.49	-0.33	-1.46	2,787.63		Weatherford	
7/10/2014	10,684	86.05	352,50	8,929	2,004	2,002	-807	1.09	-1.04	-0.33	2,882.46		Weatherford	
7/10/2014	10,779	84.18	0.34	8,937	2,098	2,097	-813	8.45	-1.97	-370.69	2,977.03		Weatherford	
7/10/2014	10,874	88.27	5.98	8,943	2,193	2,191	-808	7.32	4.31	5.94	3,071.77		Weatherford	
7/10/2014	10,969	87.78	5.34	8,946	2,288	2,286	-798	0.85	-0.52	-0.67	3,166.71		Weatherford	
7/10/2014	11,063	88.34	6.34	8,949	2,381	2,379	-789	1.22	0.60	1.06	3,260.65		Weatherford	
7/11/2014	11,158	88.64	6.99	8,952	2,475	2,474	-778	0.75	0.32	0.68	3,355.62		Weatherford	
7/11/2014	11,253	87.41	2.89	8,955	2,570	2,568	-770	4.50	-1.29	-4.32	3,450.54		Weatherford	
7/11/2014	11,348	87.84	0.07	8,959	2,665	2,663	-767	3.00	0.45	-2.97	3,545.45		Weatherford	
7/11/2014	11,443	87.62	358.04	8,963	2,760	2,758	-769	2.15	-0.23	376.81	3,640.37		Weatherford	
7/11/2014	11,538	87.28	356.30	8,967	2,854	2,853	-773	1.86	-0.25	-1.83	3,735.27			
7/11/2014	11,633	88.33	0.34	8,971	2,949	2,948	-776	4.39	1.11	-374.69	3,830.18		Weatherford	
7/11/2014	11,727	86.92	359.43	8,975	3,043	3,042	-776	1.78	-1.50	382.01	3,924.10		Weatherford	
7/11/2014	11,822	88.83	359.94	8,978	3,138	3,137	-777	2.08	2.01	0.54	4,019.03		Weatherford	
7/11/2014	11,917	88.09	358.80	8,981	3,233	3,232	-778	1.43	-0.78	-1.20	4,113.99		Weatherford	
7/11/2014	12,012	85.50	355.58	8,986	3,328	3,326	-783	4.35	-0.78	-3.39			Weatherford	
7/11/2014	12,107	87.53	0.65	8,992	3,423	3,421	-786	5.74			4,208.82		Weatherford	
7/11/2014	12,107	86.36	0.03	8,997	3,517		-785		2.14	-373.61	4,303.61		Weatherford	
7/11/2014	12,202	86.42	4.10	9,003	3,611	3,516 3,610	-782	1.39	-1.23	-0.64	4,398.47		Weatherford	
7/12/2014	12,290	86.61	5.64	9,003	3,706	3,704	-774	4.31	0.06	4.32	4,492.27		Weatherford	
7/12/2014	12,486	88.77	5.22	9,009	3,800	3,704	-765	1.63 2.32	2.27	1.62	4,587.09		Weatherford	
7/12/2014	12,581	85.87	355.71	9,012	3,895	3,893	-764	10.45	-3.05	-0.44 368.94	4,682.01 4,776.78		Weatherford	
7/12/2014	12,676	87.62	358.04	9,017	3,990	3,988	-769	3.06					Weatherford	
7/12/2014	12,770	85.49	356.13	9,022	4,083	4,082	-774	3.06	1.84 -2.27	2.45 -2.03	4,871.62		Weatherford	
7/12/2014	12,865	86.79	359.25	9,026	4,083	4,176	-778	3.55	1.37	Y	4,965.44		Weatherford	
7/12/2014	12,960	85.95	356.46	9,040	4,178	4,170	-7781	3.06		3.28	5,060.21		Weatherford	
7/12/2014	13,055	87.60	357.69	9,046	4,273	4,366	-786	2.17	-0.88 1.74	-2.94	5,155.01 5,249.85		Weatherford	
7/12/2014	13,150	85.37	350.17	9,040	4,462	4,460	-796	8.24	-2.35	1.29 -7.92			Weatherford	
7/12/2014	13,245	87.29	353.85	9,058	4,556	4,554	-809	4.36	2.02	3.87	5,344.60		Weatherford	
7/13/2014	13,339	87.97	353.72	9,030	4,649	4,647	-819	0.74			5,439.38		Weatherford	
7/13/2014	13,434	87.41	356.92	9,065	4,049	4,742	-827				5,533.30		Weatherford	
7/13/2014	13,529	85.74	358.44	9,003	4,744	4,742	-831	3.42 2.38	-0.59 -1.76	3.37 1.60	5,628.21		Weatherford	
7/13/2014	13,624	87.60	0.04	9,071	4,933	4,931	-832	2.58	1.96	-377.26	5,723.04 5,817.87		Weatherford	
7/13/2014	13,718	86.79	357.92	9,070	5,027	5,025	-834	2.36	-0.86	380.72			Weatherford	
7/13/2014	13,813	86.73	358.99	9,086	5,027	5,025	-837	1.13			5,911.75		Weatherford	
7/13/2014	13,908	86.48	359.29	9,088	5,122	5,120	-838				6,006.60		Weatherford	
7/13/2014	14,003	86.42	0.18	9,092				0.41	-0.26	0.32			Weatherford	
7/13/2014	14,003	86.92	0.16	9,098	5,311 5,405	5,310	-838	0.94	-0.06	-378.01	6,196.25		Weatherford	
7/13/2014	14,192	87.53	359.86	9,103	5,500	5,404	-838	0.61	0.53	0.30			Weatherford	
7/13/2014	14,192	87.47	359.54			5,499	-838	0.90	0.64	378.32			Weatherford	
7/13/2014	14,382	87.47	0.63	9,112	5,595	5,593	-838	0.34	-0.06	-0.34		1	Weatherford	
7/13/2014				9,116	5,690	5,688	-838	1.15	0.00	-377.80			Weatherford	
	14,476	87.35	0.51	9,121	5,784	5,782	-837	0.18		-0.13			Weatherford	
7/14/2014	14,571	85.77	358.75	9,126	5,879	5,877	-838	2.49	-1.66	377.09			Weatherford	
7/14/2014	14,666	86.05	356.86	9,133	5,973	5,972	-841	2.01	0.29		6,858.27		Weatherford	
7/14/2014	14,761	86.79	357.60	9,139	6,068	6,066	-846	1.10	0.78		6,953.08	1	Weatherford	
7/14/2014	14,856	86.17	356.41	9,145	6,163	6,161	-851	1,41	-0.65		7,047.90		Weatherford	
7/14/2014	14,950	87.53	356.54	9,150	6,256	6,255	-857	1.45	1.45	0.14	7,141.76	MWD	Weatherford	
	2.00													

# NEWFIELD

### **Directional Survey**

Legal Well Name Ute Tribal 13-9-4-3-2V	VH		Wellbore Name Original Hole				
APVUWI 43013520790000	Surface Legal Location NENW 276FNL 1452FWL S		Field Name UINTA CB - UTELA	AND BUTTE	Well Type Development		Well Configuration Type Horizontal
Well RC 500353248	County Duchesne	State/Province Utah		Spud Date 5/24	/2014 08:00	Final Rig	Release Date 7/28/2014 18:00

500353248		D	uchesne		ĮU	tah			5/24	/2014 08:0	0	7/2	8/2014 18:00
Survey Data													
Date	MD (ftKB)	Incl (°)	Azm (°)	TVD (ftKB)	VS (ft)	NS (ft)	EW (ft)	DLS (°/100ft)	Build (°/100ft)	Turn (°/100ft)	Unwrap Displace (ft)	Method	Survey Company
/14/2014	15,045	87.47	358.99	9,154	6,351	6,350	-860	2.58	-0.06	2.58	7,236.66		Weatherford
/14/2014	15,140	87.16	2.60	9,159	6,446	6,445	-859	3.81	-0.33	-375.15	7,331.54		Weatherford
/15/2014	15,235	87.90	3.51	9,163	6,541	6,539	-854	1.23	0.78	0.96	7,426.45		Weatherford
/15/2014	15,330	87.10	2.82	9,167	6,636	6,634	-849	1.11	-0.84	-0.73	7,521.36		Weatherford
/15/2014	15,424	87.04	1.12	9,172	6,730	6,728	-845	1.81	-0.06	-1.81	7,615.23		Weatherford
/15/2014	15,519	87.41	0.42	9,176	6,824	6,823	-844	0.83	0.39	-0.74	7,710.12		Weatherford
/15/2014	15,614	88.02	1.21	9,180	6,919	6,918	-843	1.05	0.64	0.83	7,805.04		Weatherford
/15/2014	15,708	87.72	359.25	9,184	7,013	7,012	-842	2.11	-0.32	380.89	7,898.97		Weatherford
/15/2014	15,803	87.72	356.87	9,187	7,108	7,106	-846	2.50	0.00	-2.51	7,993.89		Weatherford
/15/2014	15,898	88.64	357.15	9,190	7,203	7,201	-851	1.01	0.97	0.29	8,088.84		Weatherford
/15/2014	15,992	87.66	356.92	9,193	7,297	7,295	-855	1.07	-1.04	-0.24	8,182.79		Weatherford
/15/2014	16,087	87.18	357.52	9,198	7,392	7,390	-860	0.81	-0.51	0.63	8,277.70		Weatherford
/16/2014	16,182	86.55	358.50	9,203	7,486	7,485	-863	1.23	-0.66	1.03	8,372.55		Weatherford
/16/2014	16,277	85.99	359.07	9,209	7,581	7,579	-865	0.84	-0.59	0.60	8,467.35		Weatherford
/16/2014	16,372	86.36	359.44	9,215	7,676	7,674	-867	0.55	0.39	0.39	8,562.14		Weatherford
/16/2014	16,467	87.47	359.87	9,220	7,771	7,769	-867	1.25	1.17	0.45	8,657.00	MWD	Weatherford
/16/2014	16,561	87.78	358.41	9,224	7,865	7,863	-869	1.59	0.33	-1.55	8,750.92	MWD	Weatherford
/16/2014	16,656	86.54	356.87	9,229	7,960	7,958	-873	2.08	-1,31	-1.62	8,845.79	MWD	Weatherford
/16/2014	16,751	86.42	356.92	9,235	8,054	8,052	-878	0.14	-0.13	0.05	8,940.61	MWD	Weatherford
/16/2014	16,846	86.92	357.70	9,240	8,149	8,147	-882	0.97	0.53	0.82	9,035.45	MWD	Weatherford
/16/2014	16,941	86.79	356.49	9,246	8,244	8,242	-887	1.28	-0.14	-1,27	9,130.31	MWD	Weatherford
/16/2014	17,035	87,72	356.81	9,250	8,337	8,336	-892	1.05	0.99	0.34	9,224.20	MWD	Weatherford
/16/2014	17,130	86,98	357.48	9,255	8,432	8,430	-897	1.05	-0.78	0.71	9,319.10	MWD	Weatherford
/16/2014	17,225	87,84	358.83	9,259	8,527	8,525	-900	1.68	0.91	1.42	9,414.00	MWD	Weatherford
/17/2014	17,320	88.58	1.71	9,262	8,622	8,620	-900	3.13	0.78	-375.92	9,508.94	MWD	Weatherford
/17/2014	17,415	88.77	4.41	9,264	8,717	8,715	-895	2.85	0.20	2.84	9,603.91	MWD	Weatherford
/17/2014	17,509	87.71	2.98	9,267	8,811	8,809	-889	1.89	-1.13	-1.52	9,697.86	MWD	Weatherford
/17/2014	17,604	88.89	4.07	9,270	8,905	8,904	-883	1.69	1.24	1.15	9,792.81	MWD	Weatherford
/17/2014	17,699	90.06	2.08	9,271	9,000	8,998	-878	2.43	1.23	-2.09	9,887.80	MWD	Weatherford
/18/2014	17,794	85.37	356.64	9,274	9,095	9,093	-879	7.56	-4.94	373.22	9,982.66	MWD	Weatherford
//18/2014	17,889	87,16	354.15	9,281	9,190	9,188	-886	3.22	1.88	-2.62	10,077.4 5	MWD	Weatherford
/18/2014	17,984	85.95	353.28	9,286	9,284	9,282	-897	1.57	-1.27	-0.92	10,172.2 8	MWD	Weatherford
/18/2014	18,079	85.62	355.21	9,293	9,378	9,376	-906	2.06	-0.35	2.03	10,267.0 1	MWD	Weatherford
/18/2014	18,173	85.68	354.82	9,300	9,471	9,470	-914	0.42	0.06	-0.41	10,360.7 4	MWD	Weatherford
/18/2014	18,268	87,10	357.41	9,306	9,566	9,564	-921	3.10	1,49	2.73	10,455.5 4	MWD	Weatherford
/19/2014	18,363	87.41	359.13	9,311	9,661	9,659	-924	1.84	0.33	1.81	10,550.4 3		Weatherford
/19/2014	18,458	87.04	359.92	9,315	9,756	9,754	-924	0.92	-0.39	0.83	2		Weatherford
/19/2014	18,553	86.48	0.29	9,321	9,851	9,849	-924	0.71	-0.59	-378.56	10,740.1 7		Weatherford
/19/2014	18,647	87.60	1.05	9,326	9,945	9,943	-923	1.44	1.19	0.81	10,834.0 4		Weatherford
/20/2014	18,690	88.27	1.47	9,327	9,988	9,986	-922	1.84	1.56	0.98	10,877.0 1		Weatherford
/20/2014	18,743	88.95	1.48	9,329	10,040	10,039	-921	1.28	1.28	0.02	0		Weatherford
/20/2014	18,933	85.31	359.72	9,338	10,230	10,228	-919	2.13	-1.92	188.55	11,119.7 2	1	Weatherford

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## NEWFIELD

#### **Directional Survey**

Legal Well Name Ute Tribal 13-9-4-3-2V	WH .		Wellbore Name Original Hole			
430135207 <sup>9</sup> 0000	Surface Legal Location NENW 276FNL 1452FWL S		Field Name UINTA CB - UTEL		Well Type Development	Well Configuration Type Horizontal
Well RC 500353248	County Duchesne	State/Province Utah		Spud Date 5/24	/2014 08:00	Final Rig Release Date 7/28/2014 18:00

Survey Data													
Date	MD (ftKB)	Incl (°)	Azm (°)	TVD (ftKB)	VS (ft)	NS (ft)	EW (ft)	DLS (°/100ft)	Build (°/100ft)	Turn (°/100ft)	Unwrap Displace (ft)	Method	Survey Company
7/20/2014	19,027	84.87	359.86	9,346	10,324	10,322	-919	0.49	-0.47	0.15	11,213.3 7	MWD	Weatherford
7/20/2014	19,122	84.38	359.76	9,355	10,418	10,417	-920	0.53	-0.52	-0.11	11,307.9 5	MWD	Weatherford
7/20/2014	19,216	83.64	359.75	9,365	10,512	10,510	-920	0.79	-0.79	-0.01	11,401.4 4	MWD	Weatherford
7/20/2014	19,265	83.39	359.69	9,370	10,561	10,559	-920	0.52	-0.51	-0.12	11,450.1 3	MWD	Weatherford
7/20/2014	19,310	83.39	359.69	9,376	10,605	10,603	-920	0.00	0.00	0.00	11,494.8 3	Extrap.	Weatherford
7/20/2014	188,838	87.54	0.69	22,777	179,561	179,561	-356	0.00	0.00	-0.21	180,452. 96	MWD	Weatherford

NEWFIEL	D

Job Category	Job Start Date	Job End Date
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Daily Operation	ıs			
Report Start Date 8/8/2014	Report End Date 8/9/2014	Pressure well to 9000psi record Plan Forward: DFIT for 3days.	en toe sleeves . install DF I break in well. then shut i	
Start Time	08:16	End Time	15:00	Comment RU Halliburton acid crew to open toe sleeves a install DFIT gauges. Pressure test 5 ½ 20# casing to 7000 psi. hold for 30 min. pressure well to 8321 psi to fire toe sleeves. Pressure well to 9000psi record break in well. then shut in well Plan Forward: DFIT for 3days.
Start Time	15:00	End Time	00:00	Comment Monitor DFIT gauges.
Report Start Date 8/9/2014	Report End Date 8/10/2014	24hr Activity Summary Monitor DFIT Gauges		
Start Time	00:00	End Time	00:00	Comment Monitor DFIT Gauges
Report Start Date 8/10/2014	Report End Date 8/11/2014	24hr Activity Summary Monitor DFIT Gauges		
Start Time	00:00	End Time	00:00	Comment Monitor DFIT Gauges
Report Start Date 8/11/2014	Report End Date 8/12/2014	24hr Activity Summary Monitor DFIT gauges		
Start Time	00:00	End Time	00:00	Comment Monitor DFIT gauges, prepare to run CAST-M log.
Report Start Date 8/12/2014	Report End Date 8/13/2014	24hr Activity Summary Running Halliburton CAST-M lo	gs, spot frac equipmentt	
Start Time	00:00	End Time	07:00	Comment Wait for Halliburton Wireline crew
Start Time	07:00	End Time	12:00	Comment Spot crane and wireline equipment. RU 10k Lubricator . test Lube RIH w/ CAST-M tools.
Start Time	12:00	End Time	16:00	Comment RU Halliburton Pumps RU hard line test hard line to 10K . start RIH w/ Cast M logging tools . FMC NU ball catchers so we can hook up flow back. test ball catcher & Flow back line.
Start Time	16:00	End Time	22:00	Comment RIH w/ 4.54 gauge ring to KOP @8430' Halliburton pumping down gauge ring @6800 psi 14.4 bbls min wireline 76 ft min w/ 800lbs tension run down the casing to 19100'. POOH w/ 4.54 gauge tool .
Start Time	22:00	End Time	00:00	Comment MU logging tools PU 10K lubricator. w/4,35 CAST-M logging tool as crane was picking lube and tools the wireline snapped allowing tool to fall to ground stabbing in ground top part of tool was in lubricator. SD operation for the night. will resume at 6:00 am.
Report Start Date 8/13/2014	Report End Date 8/14/2014	24hr Activity Summary Running Halliburton CAST-M lo	gs, spot frac equipmentt	
Start Time	00:00	End Time	06:00	Comment
Start Time	06:00	End Time	14:00	Comment PU 10K lubricator w/ 4.35 CAST-M logging tool Test lubricator to 10K. Had trouble getting tool to go IH. Tried working up and down, pressured up to 3500 psi, finally bled well off. RIH to 200' with logging tool. Checked tool before proceeding IH, not working right. POOH. LD tool to inspect. Changed out telemetry tool, checked computer, found problem in software. RIH to 200' and calibrate tool. RIH w/ CBL, CAST-M logging tool to KOP @8430'.Pump down logging tool at 7125 psi 12.4 bbls/min, 105 fpm, LTEN 615. Max depth 19,020'. Ttl water 1190 bbl.



Start Time	14:00	End Time	20:00	Comment Run CAST-M log from 19020' to KOPat 8420'. At 20:00 Halliburton logging pulled off tghe well with the lubricator. Halliburton will RD and move over to the next well.
Start Time	20:00	End Time	00:00	Comment Well is shut in and secure SDFN.
Report Start Date 8/14/2014	Report End Date 8/15/2014		c and logging operations	to get done on the UT 14-9-4-3-2WH well
Start Time	00:00	End Time	06:00	Comment Well is secure and shut in SDFN
Start Time	06:00	End Time	00:00	Comment Well SI. Logging 14-9-4-3-2.
Report Start Date 8/15/2014	Report End Date 8/16/2014	24hr Activity Summary Pumped stg #1, P&P stg #2		
Start Time	00:00	End Time	06:00	Comment Still RU FMC frac manifold and FMC iron to the wellhead. Halliburton is also in the process of spotting frac equipment and RU. J-W Wireline is on location spotting in and RU.
Start Time	06:00	End Time	15:00	Comment RU frac equipment, WL equipment, and FB iron. Pressure test all iron to Newfield's standard.
Start Time	15:00	End Time	17:00	Comment Pump stage 1 frac as designed. No pressure issues.
Start Time	17:00	End Time	17:30	Comment Test lubricator per Newfield standards. RIH to 200'. Check guns, not reading.
Start Time	17:30	End Time	00:00	Comment POOH with WL to change out guns. Wireline figired out the were having electronic problems inside their truck. After multiple issuses with wireline and the pump down trucks we finsihed P&P on stg#2 at 23:30 and are POOH with guns. RIH with guns and Plug to KOP. pumped down guns at 14.6 bpm @ 7200 Psi, @ 182 fpm, 892 LT, pumped guns to 19,025, Pulled up and got line tension and set plug. Line tension prior to setting plug 1930, line tension after plug set 1720, plug set time 33sec. Pulled up and perf'ed at 18,975'-979', 18,781'-785'. POOH with tools, max pressure for pump down: 7200, Max rate for pump down- 14.6bpm. Total BBIs pumped- 787.5
Report Start Date 8/16/2014	Report End Date 8/17/2014	24hr Activity Summary P&P stages 3,4 & 5. Frac Stage	es 2,3 & 4	
tart Time	00:00	End Time	01:30	Comment Conitnue to POOH logging 200' past the short joint at 8451' to get a good collar log with guns and get ready to frac stg #2.
tart Time	01:30	End Time	03:30	Comment Waiting on wireline to get the issues figured out on the 14-9. it took 2 hours for wireline to get their grease head and pack off figured out to get in the well on the 14-9
štart Time	03:30	End Time	05:00	Comment Started Frac stg #2 @ 03:30. 1. Global Kick Outs set at 9500 psi. Pressure tested to 10500 psi. Job pumped with Produced Water . 2. Protechnics pumped 10 cups of CFT1100 3. Operator swapped injection points during stage for CL-31 to keep fluid from crosslinking in the blender tub. 4. Rate fell off during 4#. Blender operator thought tub still looked thick and started to crosslink in the tub. High visc on tub made it harder on blender suction pump. Problem went away once we staged in to flush and rate came back up. Will move injection port on buffer after stage too to address issue. WG-36-3.8% (47.6), FR-66-11% (1.9),BA-20-12.2% (3.2), CL-31-24.4% (2.9) MC S-2010T-5.4% (3.3) Vicon NF-4.3% (6), Losurf 300D-4.6% (5.5) Cat 3/4-6.8% (1.8), BE-9-6% (2.2)

#### **Summary Rig Activity**

Start Time	I Cad Time	I Command
05:00	End Time 08:30	Comment Plug and Perf: Stage #3 RIH with guns and plug to KOP. pumped down guns at 12.1 bpm @ 5810 psi at 219 fpm, 735 LTEN, pumped guns to 18,766'. Pulled up and got line tension and set plug at 18,730'. Line tension prior to setting plug 1938, line tension after plug set 1780, plug set time 1 minute. Perf at 18,671'-675', 18620' –624'. POOH with tools. Max pressure 5938 psi. Max rate 12.1bpm. Pumped 509.5 bbl water. All shots fired. All tools recovered.
Start Time 08:30	End Time 10:30	Comment Repair frac pumps.
Start Time 10:30	End Time 12:30	Frac stage 3. 1. Global Kick Outs set at 9500 psi. Pressure tested to 10500 psi. Job pumped with Produced Water. 2. Protechnics pumped 11 cups of CFT1000 3. Had change in water quality during job, color and smell, lowered Xlink pH and delayed Xlink. Increased Cl-31 and MO-67 to bring up Xlink pH. Continued to have low Xlink pH and delayed Xlink to end of job. 4. Had steady pressure increase during flush with 3.0ppg and pressure turned when 4.0ppg reached bottom. 5. Worked rate down to 25bpm before pressure rolled over. Able to flush well and place job completely. 6. Overall good job by crew working through issues.  Ball Seat Stage Pressures and Rate: 6000 psi @ 16.1 bpm , 5770 psi Pressure before Seating , 6005 psi Pressure after Seating WG-36-4.5% (60.5), BC-200-3.2% (3.3), MC S-2010T-
Start Time 12:30	End Time 16:00	3.4% (1.9 ) Vicon NF-4.3% (6.4 ), Losurf 300D-4.5% (5.2 ) Cat 3/4-4.5% (1.3 ), BE-9-3.4% (1.2 )  Comment Plug and Perf: Stage #4
		RIH with guns and plug to KOP. pumped down guns at 12.8 bpm @ 6740 psi at 225 fpm, 740 LTEN, pumped guns to 18,557'. Pulled up and got line tension and set plug at 18,512'. Line tension prior to setting plug 1660, line tension after plug set 1560, plug set time 1:05 minute. Perf at 18,413'-417', 18324' –328'. Max pressure 6855 psi. Max rate 12,8 bpm. Pumped 484 bbl water. POOH. All shots fired. All tools recovered.
Start Time 16:00	End Time 21:00	Comment Frac stg #4. 1. Global Kick Outs set at 9500 psi. Pressure tested to 10500 psi. Job pumped with Produced Water .  2. Protechnics pumped 16.5 cups of CFT1000  3. Had to shut down in pad for leak on CL-31 line. Couldn't get crosslink. Once fixed, came back online and got a good crosslink, and staged in to 100 mesh. Then BC-200 crosslinker went out due to transfer pump issue. Cut sand and flushed the 100 mesh.  4. Once 100 mesh was displaced, dropped rate and tried to get BC-200 going again. Ran in to issues getting crosslink again, so we shut down to troubleshoot fluids. WG-36-7.3% (156.4), BC-200-7.8% (13), BA-20-5.5% (1.9), CL-31-34.2% (7.1)  MO-67-7.8% (3.6), MC S-2010T-9.2% (7.1) Vicon NF-11.8% (25.9), Losurf 300D-12.4% (19.1)  Cat 3/4-8.4% (4.1), BE-9-9.2% (4.2)
Start Time 21:00	End Time 00:00	Comment Plug and Perf: Stage #5 RIH with guns and plug to KOP. pumped down guns at 15 bpm @ 6000 psi at 236 fpm, 980 LTEN, pumped guns to 18,275'. Pulled up and got line tension and set plug at 18,236.5'. Line tension prior to setting plug 1590, line tension after plug set 1443, plug set time 51 sec. Perf at 18,050'-054', 17,938' –942'. POOH with tools. Max pressure 6000 psi. Max rate 15.1 bpm. Pumped 518 bbl water. Currently POOH with WL.



Daily Operation		4.02.0	
Report Start Date 8/17/2014		r Activity Summary P stgs 6,7 &8. Frac stgs 6,7 &8	
tart Time	00:00	End Time 01:00	Comment Finish POOH with wireline from perfing stg #5
tart Time	01:00	End Time 02:30	Comment Frac stg #5. 1. Global Kick Outs set at 9500 psi. Pressure tested to 10500 psi. Job pumped with Produced Water . 2. Protechnics pumped 10 cups of CFT4800. Ball Seat Stage Pressures and Rate: 5479 psi @ 15.1 bpm 5297 psi Pressure before Seating , 5506 psi Pressure after Seating. WG-36-6.1% (79.9), BC-200-3.5% (3.6), MO-67-6% (1.9), MC S-2010T-5.7% (2.5) Vicon NF-2.6% (3.8), Cat 3/4-5.3% (1.5), BE-9-8.5% (2.3)
tart Time	02:30	End Time 05:00	Comment P&P stg #6 RIH with guns and plug to KOP. pumped down guns at 14 bpm @ 5820 psi at 225 fpm, 942 LTEN, pumped guns to 17,878'. Pulled up and got line tension and set plug at 17,832.5'. Line tension prior to setting plug 1530, line tension after plug set 1358, plug set time 72 sec. Perf at 17,791'-795', 17,719' -723'. POOH with tools. Max pressure 5820 psi. Max rate 14 bpm. Pumped 520 bbl water. Currently POOH with WL.
tart Time	05:00	End Time 07:00	Comment Frac stg 6. 1. Global Kick Outs set at 9500 psi. Pressure tested to 10500 psi. Job pumped with Produced Water . 2. Protechnics pumped 10 cups of CFT4800 3. Good job with no problems. Ball Seat Stage Pressures and Rate: 5625 psi @ 15.2 bpm , 5379 psi Pressure before Seating , 5658 psi Pressure after Seating. FR-66-5.9% (1), CL-31-9.8% (1.3) MO-67-3.6% (1.1), Scalesorb 7-7% (7.5), MC S-2010T-9.6% (4) Vicon NF-4.9% (6.5),
tart Time	07:00	End Time 09:30	Comment P&P stg #7 RIH with guns and plug to KOP, pumped down guns at 12 bpm @ 5440 psi at 262 fpm, 873 LTEN, pumped guns to 17,650'. Pulled up and got line tension and set plug at 17,650'. Line tension prior to setting plug 1520, line tension after plug set 1330, plug set time 52 sec. Perf at 17,601'-605', 17,530' –534'.17,520-524. POOH with tools. Max pressure 5440 psi. Max rate 12 bpm. Pumped 458 bbl water. All shots fired. All tools recovered.
art Time	09:30	End Time 12:00	Comment Frac stg #7. 1. Global Kick Outs set at 9500 psi. Pressure tested to 10500 psi. Job pumped with Produced Water . 2. Protechnics pumped 12.5 cups of CFT4000 3. Extra set of perfs, 36 total, no have indication top set of perfs fired in WL van, shot spare guns. Verified all shots fired on surface. 4. Good job with no issues, placed job completely. Ball Seat Stage Pressures and Rate: 5550 psi @ 15.1 bpm , 5310 psi Pressure before Seating , 5555 psi Pressure after Seating BC-200-3.5% (3.2), MO-67-4.9% (1.6), Vicon NF-4.4% (5.7), Losurf 300D-3.7% (3)
art Time	12:00	End Time	Comment Grease frac valves.
art Time	13:30	End Time 18:30	Comment: When WL operator went to truck after greasing valve, he found the drum brake was not set. The drum had slowly unspooled line, bird nesting it around drum.
art Time	18:30	End Time 22:00	Comment P&P stg #8 RIH with guns and plug to KOP. pumped down guns at 13 bpm @ 6100 psi at 245 fpm, 709 LTEN, pumped guns to 17,476'. Pulled up and got line tension and set plug at 17,457.5'. Line tension prior to setting plug 1616, line tension after plug set 1434, plug set time 60 sec. Perf at 17,412'-416', 17,358' –362'. POOH with tools. Max pressure 6100 psi. Max rate 13 bpm. Pumped 413 bbl water. Currently POOH with WL.



art Time	22:00	End Time 00:00	Comment Frac stg #8  1. Global Kick Outs set at 9500 psi. Pressure tested to 10500 psi. Job pumped with Produced Water .  2. Protechnics pumped 10.5 cups of CFT4800. Ball Seat Stage Pressures and Rate: 5664 psi @ 15.4 bpm , 5599 psi Pressure before Seating , 5671 psi Pressure after Seating, WG-36-2.4% (24.9), BC-200-2.6% (2.4), CL-31-8% (1.1) MO-67-8% (2.6), MC S-2010T-3.9% (1.6) Vicon NF 4.8% (6.4), Losurf 300D-2.1% (1.8)  Cat 3/4-5% (1.3), BE-9-8.1% (2)
port Start Date 8/18/2014	Report End Date 24hr Ac 8/19/2014 P&P s	stigs 9,10,11,12 & 13. Frac stgs 9,10,11 & 12	
tart Time	00:00	03:00	Comment P&P stg #9 RIH with guns and plug to KOP. pumped down guns at 13 bpm @ 6090 psi at 241 fpm, 784 LTEN, pumped guns to 17,273'. Pulled up and got line tension and set plug at 17,262.5'. Line tension prior to setting plug 1720, line tension after plug set 1480, plug set time 81 sec. Perf at 17,249'-253', 17,169' –173'. POOH with tools. Max pressure 6090 psi. Max rate 13 bpm. Pumped 396 bbl water. Currently POOH with WL.
art Time	03:00	End Time 05:30	Comment Frac stg #9 1. Global Kick Outs set at 9500 psi. Pressure tested to 10500 psi. Job pumped with Produced Water 2. Protechnics pumped 10 cups of CFT1200
			3. Crosslink samples in bath got accidentally knocked over. Only break time for pad was obtained. Ball Seat Stage Pressures and Rate: 5705 psi @ 15.2 bpm , 5543 psi Pressure before Seating , 5723 psi Pressure after Seating. WG-36-4.4% (49.8 ), FR-66-6.8% (1.1 ), CL-31-9.6% (1.3 ) MC S-2010T-4.6% (1.9 ) Losurf 300D-3.4% (2.8 )
rt Time	05:30	End Time 07:30	Comment Plug and Perf Stage #10 RIH with guns and plug to KOP. Pump down guns at 14 bpm at 5710 psi at 209 fpm, 877 LTEN, pumped guns to 17,160'. Pulled up and got line tension and set plug at 17,120'. Line tension prior to setting plug 1610, line tension after plug set 1375, plug set time 1:10 minute. Perf at 17,098'-102', 17,004' –008'. Max pressure 5798 psi. Max rate 14 bpm. Pump 409 bbl water. POH. All shots fired. All tools recovered.
rt Time	07:30	End Time 10:00	Comment Frac stg #10. 1. Global Kick Outs set at 9500 psi. Pressure tested to 10500 psi. Job pumped with Produced Water . 2. Protechnics pumped 11 cups of CFT1200 3. Lost Xlink during the 2.0ppg sand stg, swapped M -67 totes and Xlink came back. 4. No other issues, overall good job by crew. Able to place job completely. Ball Seat Stage Pressures and Rate: 6100 psi @ 15.5 bpm , 5765 psi Pressure before Seating , 6100 psi Pressure after Seating BC-200-2.9% (2.7), MO-67-4.8% (1.6), MC S-2010T-2.7% (1.1) Vicon NF-4.2% (5.6), Losurf 300D-3.9% (3.2)
rt Time	10:00	End Time 12:30	Comment Grease frac valves.
rt Time	12:30	End Time 15:30	Comment Plug and Perf Stage #11 RIH with guns and plug to KOP. Pump down guns at 12.4 bpm at 5602 psi at 245 fpm, 798 LTEN, pumped guns to 16,966'. Pulled up and got line tension and set plug at 16,950'. Line tension prior to setting plug 1730, line tension after plug set 1480, plug set time 57 seconds. Perf at 16,898'-902', 16,788' –792'. Max pressure 5744 psi. Max rate 14.3 bpm. Pump 388 bbl water. POH. All shots fired. All tools recovered.

#### **Summary Rig Activity**

Start Time 15:30	End Time	Comment Frac stg #11. 1. Global Kick Outs set at 9500 psi. Pressure tested to 10500 psi. Job pumped with Produced
10.50	17.50	Water . 2. Protechnics pumped 11 cups of CFT1200
		<ul><li>3. Had steady pressure increase from Linear and Xlink fluid on formation, rolled over with 1.0ppg 100 Mesh reached bottom.</li><li>4. No other issues, overall good job. Placed completely.</li></ul>
		Ball Seat Stage Pressures and Rate: 6375 psi @ 15 bpm , 5885 psi Pressure before Seating , 6375 psi Pressure after Seating. WG-36-3.9% (51.2 ), BC-200-2.9% (3 ),MO-67-4.7% (1.7 ), MC S-2010T-3.3% (1.4 ) Vicon NF-16.4% (23.2 ), Losurf 300D-2.2% (1.9 )
Start Time	End Time 20:30	Comment P&P Stg #12
17:30	20:30	RIH with guns and plug to KOP. Pump down guns at 12.4 bpm at 5602 psi at 245 fpm, 798 LTEN, pumped guns to 16,966'. Pulled up and got line tension and set plug at 16,950'. Line tension prior to setting plug 1730, line tension after plug set 1480, plug set time 57 seconds. Perf at 16,898'-902', 16,788' -792'. Max pressure 5744 psi. Max rate 14.3 bpm. Pump 388 bbl water. Currently POH with guns.
Start Time 20:30	End Time 22:30	Comment Frac stg #12 1. Global Kick Outs set at 9500 psi. Pressure tested to 10500 psi. Job pumped with Produced Water
		2. Protechnics pumped 12 cups of CFT3900
		3. Job went well with all proppant placed. Ball Seat Stage Pressures and Rate: 5919 psi @ 14.9 bpm , 5493 psi Pressure before Seating , 5919 psi Pressure after Seating. BA-20-9.3% (1.7 ), MC S-2010T-3.2% (1.2 ) Vicon NF-2.5% (3 ), BE-9-4.7% (1.1 )
start Time	End Time	Comment
22:30	00:00	P&P stg #13. RIH with guns and plug to KOP. Pump down guns at 13 bpm at 5850 psi at 291 fpm, 790 LTEN, pumped guns to 16,538'. Pulled up and got line tension and set plug at 16,512.5'. Line tension prior to setting plug 1576, line tension after plug set 1430, plug set time 58 seconds. Perf at 16,490'-494', 16,385' –389'. Max pressure 5850 psi. Max rate 13.1 bpm. Pump 325 bbl water. Currently POOH with guns.
Report Start Date   Report End Date   24hr Activity S 8/19/2014   8/20/2014   P&P stgs 1	ummary   4,15,16 & 17. Frac stgs 13,14,15,16 & 17	
Start Time 00:00	End Time 01:30	Comment POOH after P&P stg #13
Start Time 01:30	End Time 02:30	Comment Halliburton had some issues with a couple of 1" stops not holding pressure so they had to grease them because they have none on location and to my understanding none in the yard. So, it delayed the frac about one hour
start Time 02:30	End Time 04:30	Comment Frac stg #13. 1. Global Kick Outs set at 9500 psi. Pressure tested to 10500 psi. Job pumped with Produced Water .2. Protechnics pumped 10 cups of CFT1300 3. Job went well with all proppant placed.Ball Seat Stage Pressures and Rate: 5635 psi @ 14.8 bpm , 5448 psi Pressure before Seating , 5635 psi Pressure after Seating. BC-200-2.6% (2.1 ), FR-66-8.1% (1.2 ),BA-20-7.3% (1.3 ), CL-31-8.5% (1 )MO-67-7% (2 ), MC S- 2010T-6.8% (2.5 ) Vicon NF-2.6% (3 ), Losurf 300D-2.6% (1.9 )BE-9-6.8% (1.5 )



Start Time		End Time	Compat
	04:30	06:30	P&P stg #14 RIH with guns and plug to KOP. Pump down guns at 14 bpm at 5835 psi at 280 fpm, 810 LTEN, pumped guns to 16,342'. Pulled up and got line tension and set plug at 16,315.5'. Line tension prior to setting plug 1606, line tension after plug set 1450, plug set time 62 seconds. Perf at 16,306'-310', 16,176' –180'. Max pressure 5835 psi. Max rate 14 bpm. Pump 321 bbl water. Currently POOH with guns.
Start Time	06:30	End Time 08:45	Comment Frac stg #14. 1. Global Kick Outs set at 9500 psi. Pressure tested to 10500 psi. Job pumped with Produced Water 2. Protechnics pumped 10.5 cups of CFT1300 3. Good job with no problems, place job completely. Ball Seat Stage Pressures and Rate: 5945 psi @ 15.1 bpm , 5580 psi Pressure before Seating , 5945 psi Pressure after Seating WG-36-3.1% (34.6), BA-20-5.9% (1.1), CL-31-8.5% (1.1) MO-67-6.3% (1.9), MC S-2010T-2.8% (1.1) Vicon NF-4.1% (5.1), Losurf 300D-2.8% (2.1)
Start Time	08:45	End Time 11:00	Comment Plug and Perf Stage #15 RIH with guns and plug to KOP. Pump down guns at 14 bpm at 5799 psi at 257 fpm, 835 LTEN, pumped guns to 16,133'. Pulled up and got line tension and set plug at 16,110'. Line tension prior to setting plug 1418, line tension after plug set 1285, plug set time 1 minute, 15 seconds. Perf at 16,072'-076', 15,973' –977'. Max pressure 5871 psi. Max rate 14 bpm. Pump 348 bbl water. POH. All shots fired. All tools recovered.
Start Time	11:00	End Time 13:00	Comment Frac stage #15. 1. Global Kick Outs set at 9500 psi. Pressure tested to 10500 psi. Job pumped with Produced Water . 2. Protechnics pumped XX cups of CFTXX00 3. Good job with no issues, placed completely.  Ball Seat Stage Pressures and Rate: 5760 psi @ 15.2 bpm , 5440 psi Pressure before Seating , 6765 psi Pressure after Seating MO-67-3.8% (1.1), MC S-2010T-4.3% (1.6) Vicon NF-2.7% (3.4), Losurf 300D-2.2% (BE-9-4.4% (1))
Start Time	13:00	End Time 15:00	Comment Plug and Perf Stage #16 RIH with guns and plug to KOP. Pump down guns at 14 bpm at 5648 psi at 249 fpm, 943 LTEN, pumped guns to 15,916'. Pulled up and got line tension and set plug at 15,910'. Line tension prior to setting plug 1391, line tension after plug set 1270, plug set time 49 seconds. Perf at 15,874'-878', 15,764' –768'. Max pressure 5731 psi. Max rate 14 bpm. Pump 331 bbl water. POH. All shots fired. All tools recovered.
tart Time	15:00	End Time 17:00	Comment Frac stage #16. 1. Global Kick Outs set at 9500 psi. Pressure tested to 10500 psi. Job pumped with Produced Water . 2. Protechnics pumped 11 cups of CFT1300 3. Good job with no issues, placed completely. Ball Seat Stage Pressures and Rate: 6365 psi @ 25.5 bpm , 6040 psi Pressure before Seating , 6365 psi Pressure after Seating WG-36-5.3% (58.7 ), BC-200-5.6% (4.8 ), Vicon NF-5% (6.2 ), Losurf 300D-5.6% (4.3 )  Cat 3/4-6.6% (1.6 ), BE-9-5.2% (1.2 )
Start Time	17:00	End Time 19:30	Comment FMC came out to Grease the frac stack and manifold.
itart Time	19:30	End Time 22:00	Comment RIH with guns and plug to KOP. Pump down guns at 13 bpm at 5860 psi at 265 fpm, 775 LTEN, pumped guns to 15,706'. Pulled up and got line tension and set plug at 15,710'. Line tension prior to setting plug 1379, line tension after plug set 1216, plug set time 56 seconds. Perf at 15,623'-627', 15,568' –572'. Max pressure 5860 psi. Max rate 13 bpm. Pump 310 bbl water. Currently POOH.

#### **Summary Rig Activity**

Start Time 22:00	End Time 00:00	Comment Frac stg #17 1. Global Kick Outs set at 9500 psi. Pressure tested to 10500 psi. Job pumped with Produced
22.00	00.00	Water . 2. Protechnics pumped XX cups of CFTXX00
		3. Stage went well with all proppant placed.
		Ball Seat Stage Pressures and Rate: 5768 psi @ 15.6 bpm , 5553 psi Pressure before Seating , 5768 psi Pressure after Seating. WG-36-4.2% (42.3 ), BC-200-3.9% (3.1 ), Scalesorb 7-6.2% (6.6 ), MC S-2010T-4.6% (1.7 ) Vicon NF-3.5% (4.1 ), Losurf 300D-3.2% (2.3 )Cat 3/4-6% (1.3 ),
	19,20 &21. Frac stgs 18,19 & 20	
Start Time 00:00	End Time 02:30	Comment P&P stg #18 RIH with guns and plug to KOP. Pump down guns at 14 bpm at 5750 psi at 280 fpm, 900 LTEN, pumped guns to 15,504'. Pulled up and got line tension and set plug at 15,482.5'. Line tension prior to setting plug 1541, line tension after plug set 1345, plug set time 83 seconds. Perf at 15,478'-482', 15,353' –357'. Max pressure 5750 psi. Max rate 14 bpm. Pump 293 bbl water. Currently POOH.
o2:30	End Time 04:30	Comment Halliburton screened the well off by sending a 10lb slug down hole at some point in stg #18. Someone fat fingered a number a didn't catch it until it was already on the denso. The next update will have more info on what actually happened. 1. Global Kick Outs set at 9500 psi. Pressure tested to 10500 psi. Job pumped with Produced Water. 2. Protechnics pumped XX cups of CFTXX00 3. Had a issue with the growler as crosslink was brought on. Issue was resolved as pumps were being brought off line. 4. Pad was extended to insure good crosslink before staging into proppant. 5. Incorrect lbs/rev set point was entered at the beginning of the 5 ppg resulting in a 11 ppg slug. With sand finishing shortly after. 6. Pressure turned up just after the high concentration sand hit formation. Pumps kicked out with 4346 gallons pumped in flush. 7. Well was turned over to flowback.  Ball Seat Stage Pressures and Rate: 6470 psi @ 14.7 bpm , 5740 psi Pressure before Seating , 6470 psi Pressure after Seating WG-36-6.1% (75), Losurf 300D-2.6% (1.9)
		3/4-4.8% (1.2), BE-9-5% (1) 53.2% OF THE DESIGNED PROPPANT WAS PLACED IN THE FORMATION. 53,247 LBS OF PROPPANT PLACED IN THE FORMATION. 49,710 LBS OF PROPPANT LEFT IN CASING.
art Time 04:30	End Time 08:30	Comment Flowed back 1320 bbl at 8.7 bpm and 3000 psi for 850 bbl. Then flowed 4 bpm at 3500 psi on 9/64" choke. Trace of sand and paraffin in sample. Did not catch ball. Pump 502 bbl sweep (1.5 well bore volume).
Start Time 08:30	End Time 10:30	Comment Plug and Perf Stage #19 RIH with guns and plug to KOP. Pump down guns at 14 bpm at 7816 psi at 235 fpm, 714 LTEN, pumped guns to 15,336'. Pulled up and got line tension and set plug at 15,306'. Line tension prior to setting plug 1442, line tension after plug set 1225, plug set time 65 seconds. Perf at 15,252'-256', 15,146' –150'. Max pressure 7860 psi. Max rate 14 bpm. Pump 313 bbl water. POH. All shots fired. All tools recovered.

#### **Summary Rig Activity**

art Time	End Time	Comment
10:30	13:00	Frac stage #19. 1. Global Kick Outs set at 9500 psi. Pressure tested to 10500 psi. Job pumped with Produced Water . 2. Protechnics pumped 10.5 cups of CFT3700 — 3. Pressure came up quicker than expected during flush. Reduced rate to stay under max pressure. 4. Had to come offine at WBV due to pressure, able to get bac on and establish rate. Extended flush to ensure WL could get down. 5. Good job by crew making rate adjustments. Placed prop completely.  Ball Seat Stage Pressures and Rate: 5995 psi @ 14,7 bpm , 5995 psi Pressure before Seating , 5995 psi Pressure after Seating BC-200-4.9% (3.8), FR-66-4.4% (1.2), MC S-2010T-4.9% (2.4) Vicon NF-3.9% (5.5), Losurf 300D-3.8% (3.7)
art Time 13:00	End Time 14:00	Comment Change out Halliburton valve in pump down line.
art Time 14:00	End Time 16:00	Comment Plug and Perf Stage #20 RIH with guns and plug to KOP. Pump down guns at 11.1 bpm at 7236 psi at 205 fpm, 604 LTEN, pumped guns to 15,110'. Pulled up and got line tension and set plug at 15,080'. Line tension prior to setting plug 1591, line tension after plug set 1340, plug set time 69 seconds. Perf at 15,035'-039', 14,930' –934'. Max pressure 8320 psi. Max rate 12 bpm. Pump 282 bbl water. POH. Alls hots fired. All tools recovered.
art Time 16:00	End Time 18:00	Frac stg #20. 1. Global Kick Outs set at 9500 psi. Pressure tested to 10500 psi. Job pumped with Produced Water 2. Protechnics pumped 11.5 cups of CFT3700
		<ul> <li>3. Based on previous two intervals, used 5ppg max prop design.</li> <li>4. Lost MO-67 in th 1.0ppg sand stg, sucked tote low, extended 1.0ppg stage to get MO going.</li> <li>5. No other issues, able to place job completely.</li> </ul>
		Ball Seat Stage Pressures and Rate: 5625 psi @ 14.8 bpm , 5505 psi Pressure before Seating , 5625 psi Pressure after Seating. WG-36-3.8% (47.7 ), BC-200-4.2% (4.1 ), MO-67-4.8% (1.6 ), MC S-2010T-3.9% (1.6 ) Vicon NF-4.3% (5.7 ), Losurf 300D-3.9% (3.1 )
rt Time 18:00	End Time 21:00	Comment FMC finally finished up greasing the frac stack and frac manifold. It took 2.5 hours to do both wells.
rt Time 21:00	End Time 00:00	Comment Plug and Perf Stage #21 RIH with guns and plug to KOP. Pump down guns at 13 bpm at 5800 psi at 267 fpm, 768 LTEN, pumped guns to 14,870'. Pulled up and got line tension and set plug at 14,870'. Line tension prior to setting plug 1400, line tension after plug set 1288, plug set time 63 seconds. Perf at 14,821'-825', 14,736' –740'. Max pressure 5800 psi. Max rate 13 bpm. Pump 246 bbl water. Currently POOH with guns.

#### **Summary Rig Activity**

rt Time		End Time	Comment
· inic	00:00	01:00	Frac stg #21.  1. Global Kick Outs set at 9500 psi. Pressure tested to 10500 psi. Job pumped with Produced Water.  2. Protechnics pumped 11.5 cups of CFT1500  3. Pumped a 5 ppg max proppant concentration design.  4. Stage went well with all proppant placed.
			Ball Seat Stage Pressures and Rate: 5948 psi @ 15.2 bpm , 5564 psi Pressure before Seating , 5948 psi Pressure after Seating. Vicon NF-2.1% (2.5 ),
t Time	01:00	End Time 03:00	Comment P&P stg 22 RIH with guns and plug to KOP. Pump down guns at 14 bpm at 5932 psi at 260 fpm, 763 LTEN, pumped guns to 14,664'. Pulled up and got line tension and set plug at 14,638.5'. Line tension prior to setting plug 1510, line tension after plug set 1315, plug set time 69 seconds. Perf at 14,609'-613', 14,525' –529'. Max pressure 615 psi. Max rate 14 bpm. Pump 267 bbl water. Currently POOH with guns.
Time	03:00	End Time 05:00	Comment Frac stg #22 1. Global Kick Outs set at 9500 psi. Pressure tested to 10500 psi. Job pumped with Produced Water 2. Protechnics pumped 11 cups of CFT1500 3. Stage went well with all proppant placed.
			Ball Seat Stage Pressures and Rate: 6323 psi @ 15 bpm , 5692 psi Pressure before Seating , 6299 psi Pressure feter Seating. BC-200-2.1% (1.6 ), Losurf 300D-4.4% (3.1 )
t Time	05:00	End Time 07:00	Comment Plug and Perf Stage #23 RIH with guns and plug to KOP. Pump down guns at 14 bpm at 6030 psi at 285 fpm, 730 LTEN, pumped gun to 14,501'. Pulled up and got line tension and set plug at 14,450'. Line tension prior to setting plug 1558, line tension after plug set 1300, plug set time 48 seconds. Perf at 14,393'-397', 14,260' –264'. Max pressure 60 psi. Max rate 14 bpm. Pump 253 bbl water. POH. All guns fired. All tools recovered.
t Time	07:00	End Time 09:00	Comment Frac stage #23. 1. Global Kick Outs set at 9500 psi. Pressure tested to 10500 psi. Job pumped with Fresh Water . 2. Protechnics pumped XX cups of CFTXX00 3. Extended Xlink pad to pH lined out, low pH in to from BA-20. Adjusted buffers through out job to compensate for water change. 4. No other issues, good by crew making adjustments to fluid. Placed job completley.  Ball Seat Stage Pressures and Rate: 5915 psi @ 14.8 bpm , 5540 psi Pressure before Seating , 5915 psi
			Pressure after Seating BC-200-4.5% (4.7), MC S-2010T-4.8% (2 ) Vicon NF-4.9% (6.8), Losurf 300D-4.8% (4 ) Cat 3/4-4.4% (1.2), CLA-Web-2.4% (2), BE-9-4.8% (1.2)

#### **Summary Rig Activity**

Start Time	09:00	End Time 11:00	Comment Plug and Perf Stage #24 RIH with guns and plug to KOP. Pump down guns at 14 bpm at 5644 psi at 252 fpm, 882 LTEN, pumped guns to 14,255', Pulled up and got line tension and set plug at 14,207'. Line tension prior to setting plug 1454, line tension after plug set 1233, plug set time 66 seconds. Perf at 14,187'-191', 14,049' -053'. Max pressure 5656 psi. Max rate 15 bpm. Pump 254 bbl water.
Start Time	11:00	End Time 14:00	Comment Frac stage #24.1. Global Kick Outs set at 9500 psi. Pressure tested to 10500 psi. Job pumped with Fresh Water .  2. Protechnics pumped 11 cups of CFT1500 3. Had pressure come up when 4ppg reached bottom, 6.ppg at blender. Reduced rate to try to line out pressure 4. Pressure continued to climb during flush, worked rate down as rate increase. Pressure turned when 5ppg hit bottom. 5. Come off 3109gal into flush, turned well over to flowback.  6. Placed approx 61400lbs of prop and left approx 38800lbs in the wellbore.  Ball Seat Stage Pressures and Rate: 6195 psi @ 15 bpm , 5540 psi Pressure before Seating , 6190 psi Pressure after Seating WG-36-2.1% (20.7), BC-200-4.9% (3.7), Scalesorb 7-4.9% (5.1), Vicon NF-4.8% (4.8), Losurf 300D-3.6% (2.1) CLA-Web-3.6% (2.1),  61,400 LBS OF PROPPANT PLACED IN THE FORMATION.  38,800 LBS OF PROPPANT LEFT IN CASING.
tart Time	14:00	End Time 16:00	Comment Flow back well at 8.1 bpm. With 800 bbl flowed, sample had only a slight trace of sand. Flow well on 24/64" choke with 3800 psi at 3.8 bpm. Recovered 1300 bbl water with trace of paraffin.
tart Time	16:00	End Time 19:00	Comment P&P stg #25 RIH with guns and plug to KOP. Pump down guns at 13.1 bpm at 6588 psi at 262 fpm, 714 LTEN, pumped guns to 13,950'. Pulled up and got line tension and set plug at 13,925.5'. Line tension prior to setting plug 1438, line tension after plug set 1225, plug set time 57 seconds. Perf at 13,900'-904', 13,785' –789'. Max pressure 6925 psi. Max rate 13.1 bpm. Pump 229 bbl water. Currently POOH with guns.
ŝtart Time	19:00	End Time 00:00	Comment FMC's greasing the frac stack and frac manifold. We are done greasing the frac stack and frac manifold. We put pressure on the stack and worked the inner flowcross valves on both wells and didn't see any problems with them. We have the flowback tank on the 13-9-4-3-2WH about half way cleaned out. So we will wait for them to get done with the sand in that tank to frac stg #25. We still have to clean the sand out of the flowback tank on the 14-9-4-3-2WH.
Report Start Date 8/22/2014	Report End Date 24hr Activity 8/23/2014 P&P stgs	Summary 526,27,28,29 & 30. Frac stgs 25,26,27,28 &	29
Start Time	00:00	End Time 00:30	Comment Finally got the flowback tanks cleaned out on this well so we can continue frac operations



Start Time	End Time	Comment
00:30	02:15	Global Kick Outs set at 9500 psi. Pressure tested to 10500 psi. Job pumped with Fresh Water .
		2. Protechnics pumped 12 cups of CFT2900
		3. Pumped a 5 ppg max proppant concentration design with 10,000 lbs of 100 Mesh.
		4. Stage went well with all proppant placed.
		Ball Seat Stage Pressures and Rate: 6330 psi @ 14.6 bpm , 5673 psi Pressure before Seating , 6320 psi Pressure after Seating. MC S-2010T-3.6% (1.9 ) CLA-Web-3.6% (3.7 ),
Start Time 02:15	End Time 04:15	Comment P&P stg #26
start Time	End Time	Comment Comment
04:15	05:00	Halliburton had to replace some seats in a pump truck
Start Time 05:00	End Time 07:30	Frac stg #26. 1. Global Kick Outs set at 9500 psi. Pressure tested to 10500 psi. Job pumped with Fresh Water .  2. Protechnics pumped 12 cups of CFT2800 3. Pumped 5 ppg Max propapnt concentration design with 10,000 lbs. 100 Mesh. 4. Pressure began rising during 5 ppg. Had to drop rate during flush to alleviate pressure, 5. Extended flush until pressure dropped off and pumpdown rate could be achieved. Ball Seat Stage Pressures and Rate: 6145 psi @ 15.2 bpm , 5535 psi Pressure before Seating , 6145 psi Pressure after Seating WG-36-5.1% (65.1 ), BC-200-4.2% (4.1 ), MC
Start Time	End Time	S-2010T-3.6% (1.5 ) Vicon NF-5.1% (6.9 ), Losurf 300D-5% (4 ), CLA-Web-5% (4 ),
07:30	09:30	Plug and Perf Stage #27 RIH with guns and plug to KOP. Pump down guns at 12 bpm at 7848 psi at 217 fpm, 600 LTEN, pumped guns to 13,526'. Pulled up and got line tension and set plug at 13,500'. Line tension prior to setting plug 1413, line tension after plug set 1227, plug set time 66 seconds. Perf at 13,463'-467', 13,385' –389'. Max pressure 8543 psi. Max rate 12 bpm. Pump 256 bbl water. POH. All shots fired. All guns recovered.
Start Time 09:30	End Time 12:00	Comment Frac stage #27. 1. Global Kick Outs set at 9500 psi. Pressure tested to 10500 psi. Job pumped with Fresh Water .2. Protechnics pumped 11 cups of CFT2900 3. Lower pressure than previous stages, saw good pressure relief from Acid. 4. Trouble lining out LoSurf 300 during 4.0ppg stg, let tote get low. 5. No problems pumping job, placed completely. Ball Seat Stage Pressures and Rate: 5630 psi @ 14.8 bpm , 5375 psi Pressure before Seating , 5630 psi Pressure after Seating. WG-36-3.7% (46.8), BC-200-4.8% (4.7), MC S- 2010T-3.3% (1.3) Vicon NF-4.8% (6.2), Losurf 300D-4.4% (3.4) CLA-Web-4.6% (3.6),
Start Time 12:00	End Time 14:30	Comment Plug and Perf Stage #28 RIH with guns and plug to KOP. Pump down guns at 14 bpm at 880 psi at 252 fpm, 880 LTEN, pumped guns to 13,356'. Pulled up and got line tension and set plug at 13,330'. Line tension prior to setting plug 1469, line tension after plug set 1268, plug set time 62 seconds. Perf at 13,263'-267', 13,153' –157'. Max pressure 5560 psi. Max rate 14 bpm. Pump 216 bbl water. POH. Second gun did not fire. First and third guns fired. All tools recovered.

#### **Summary Rig Activity**

start Time 14:30	End Time 16:45	Comment Frac stage #28. 1. Global Kick Outs set at 9500 psi. Pressure tested to 10500 psi. Job pumped with Fresh Water . 2. Protechnics pumped 11 cups of CFT2900 3. Good job with no problems, placed completely. Ball Seat Stage Pressures and Rate: 5310 psi @ 14.8 bpm , 5080 psi Pressure before Seating , 5310 psi Pressure after Seating. WG-36-4.7% (57.8 ), BC-200-4.1% (3.9 ), MC S-2010T-4.3% (1.7 ) Vicon NF-4.9% (6.4 ), Losurf 300D-4.8% (3.7 ) Cat 3/4-4.2% (1.1 ), CLA-Web-4.8% (3.7 ), BE-9-4.4% (1)
tart Time 16:45	End Time 18:30	Comment Plug and Perf Stage #29 RIH with guns and plug to KOP. Pump down guns at 14 bpm at 5241 psi at 272 fpm, 870 LTEN, pumped guns to 13,142'. Pulled up and got line tension and set plug at 13,126'. Line tension prior to setting plug 1516, line tension after plug set 1313, plug set time 50 seconds. Perf at 13,085'-089', 12,963' –967'. Max pressure 5275 psi. Max rate 14 bpm. Pump 191 bbl water. POH. All guns fired. All tools recovered.
tart Time 18:30	End Time 20:00	Comment FMC is greasing the frac stack and frac manifold
Start Time 20:00	End Time 22:30	Comment Frac stg #291. Global Kick Outs set at 9500 psi. Pressure tested to 10500 psi. Job pumped with Fresh Water  2. Protechnics pumped XX cups of CFTXX00  Ball Seat Stage Pressures and Rate: 6149 psi @ 13.9 bpm , 5345 psi Pressure before Seating , 6103 psi Pressure after Seating
tart Time	End Time	WG-36-3% (39.8), BC-200-5.8% (5.9), CL-31-7.7% (1.2)  Scalesorb 7-7.7% (8.3), MC S-2010T-4.1% (1.6) Vicon NF-5.1% (6.8), Losurf 300D-4.8% (3.8) Cat 3/4-5.9% (1.6), CLA-Web-6% (4.8), BE-9-5.2% (1.2)
22:30	00:00	Plug and Perf Stage #30 RIH with guns and plug to KOP. Pump down guns at 13 bpm at 5465 psi at 275 fpm, 750 LTEN, pumped guns to 12,940'. Pulled up and got line tension and set plug at 12,920'. Line tension prior to setting plug 1430, line tension after plug set 11237, plug set time 37 seconds. Perf at 12,875'-879', 12,756' –760'. Max pressure 546: psi. Max rate 13 bpm. Pump 176 bbl water. Currently POOH with guns.
eport Start Date Report End Date 8/23/2014 8/24/201		
3/23/2014   3/24/201 tart Time 00:00	End Time 00:45	Comment POOH after P&P stg #30

#### **Summary Rig Activity**

Start Time 00:45	End Time 02:45	Comment: 1, Global Kick Outs set at 9500 psi. Pressure tested to 10500 psi. Job pumped with Fresh Water
		2. Protechnics pumped XX cups of CFTXX00
		3. Pressure turned up with 3 ppg on formation and screws were cut.
		4. Pumps kicked out with ~4300 gallons flushed.
		5. Well was turned over to flowback.
		Ball Seat Stage Pressures and Rate: 5465 psi @ 14 bpm , 5100 psi Pressure before Seating , 5465 psi Pressure after Seating WG-36-5.9% (56.9 ), BC-200-4.6% (3.3 ), CL-31-9.1% (1 )
		MC S-2010T-6% (1.7 ) Vicon NF-4.2% (4.2 ), Losurf 300D-4.2% (2.4 )
		CLA-Web-4.5% (2.6), BE-9-7.1% (1.2)
		38.3% OF THE DESIGNED PROPPANT WAS PLACED IN THE FORMATION.
		38,290 LBS OF PROPPANT PLACED IN THE FORMATION. 37,510 LBS OF PROPPANT LEFT IN CASING.
Start Time 02:45	End Time 05:00	Comment Flowing the well back at 8.1bpm @ 2700psi on a 29/64 choke. We are going to flowback 600bbls.
Start Time 05:00	End Time 06:00	Comment Flushed the well
Start Time 06:00	End Time 08:30	Comment Plug and Perf Stage #31 RIH with guns and plug to KOP. Pump down guns at 14 bpm at 6226 psi at 238 fpm, 785 LTEN, pumped guns to 12,744'. Pulled up and got line tension and set plug at 12,720'. Line tension prior to setting plug 1427, line tension after plug set 1215, plug set time 55 seconds. Perf at 12,690'-694', 12,575' –579'. Max pressure 6332 psi. Max rate 14 bpm. Pump 197 bbl water. POH. All shots fired. All tools recovered.
Start Time 08:30	End Time 11:00	Comment Frac stage #31. 1. Global Kick Outs set at 9500 psi. Pressure tested to 10500 psi. Job pumped with Fresh Water . 2. Protechnics pumped 10.5 cups of CFT1700 3. Had pressure start to increase with 2.0ppg and 3.0ppg on bottom, cut prop at the movers. 4. Saw sight increase in pressure during flush but lined out with inverse hydrostatic. 5. Able to flush well completely. WG-36-3.1% (37.6), BC-200-4.9% (4.6), MC S-2010T- 4.6% (2.2) Vicon NF-4.5% (6.6), Losurf 300D-4.6% (4.4) CLA-Web-4.8% (4.6), 90.3% of sand placed on formation.
Start Time 11:00	End Time 13:00	Comment. Plug and Perf Stage #32 RIH with guns and plug to KOP. Pump down guns at 14 bpm at 5656 psi at 226 fpm, 902 LTEN, pumped guns to 12,578'. Pulled up and got line tension and set plug at 12,510'. Line tension prior to setting plug 1335, line tension after plug set 1135, plug set time 67 seconds. Perf at 12,475'-479', 12,361' –365'. Max pressure 5942 psi. Max rate 14 bpm. Pump 199 bbl water. POH. All shots fired. All tools recovered.

#### **Summary Rig Activity**

End Time 14:30	Comment Frac stage #32. 1. Global Kick Outs set at 9500 psi. Pressure tested to 10500 psi. Job pumped with Fresh Water. 2. Protechnics pumped 11 cups of CFT1700. 3. Good job with no issues, placed completely. Ball Seat Stage
	Pressures and Rate: 5845 psi @ 14.9 bpm , 5315 psi Pressure before Seating , 5860 psi Pressure after Seating WG-36-2.3% (29 ), BC-200-4.2% (4.1 ), MC S-2010T-3.3% (1.3 ) Vicon NF-4.6% (5.9 ), Losurf 300D-4.7% (3.5 ) CLA-Web-4.6% (3.5 ),
16:15	Comment Plug and Perf Stage #33 RIH with guns and plug to KOP. Pump down guns at 14 bpm at 5385 psi at 271 fpm, 859 LTEN, pumped guns to 12,336'. Pulled up and got line tension and set plug at 12,300'. Line tension prior to setting plug 1436, line tension after plug set 1245, plug set time 48 seconds. Perf at 12,260'-264', 12,165' –169'. Max pressure 5460 psi. Max rate 14 bpm. Pump 159 bbl water, POH. All shots fired. All tools recovered.
End ⊤ime 17:45	Comment Frac stage #33. 1. Global Kick Outs set at 9500 psi. Pressure tested to 10500 psi. Job pumped with Fresh Water . 2. Protechnics pumped 12 cups of CFT2500
	<ul><li>3. Didn't have Gel screw going on Growler, lost viscosity in 1.0ppg 100Mesh stg. Cut 100Mesh and reduced rate to 25bpbm get tub back.</li><li>4. Started to lose rate on BC pump, kept rate at 30bpm until hose could be moved to blender tub.</li></ul>
	Able to get BC-200 back to set point, brought rate up to designed rate.
	5. No problems placing job completely.
	Ball Seat Stage Pressures and Rate: 5940 psi @ 14.9 bpm , 5265 psi Pressure before Seating , 5930 psi Pressure after Seating WG-36-4.5% (61.7 ), BC-200-4.4% (4.6 ),
	MC S-2010T-3% (1.2 ) Vicon NF-4.8% (6.6 ), Losurf 300D-4.3% (3.4 ) CLA-Web-4.3% (3.4 ), BE-9-4.7% (1.1 )
End Time	Comment FMC greased the Frac stack and Frac Manifold.
End Time 22:30	Comment Flushed the well before wireline RIH Plug and Perf Stage #34 RIH with guns and plug to KOP. Pump down guns at 14 bpm at 5750 psi at 267 fpm, 850 LTEN, pumped guns to 12,050'. Pulled up and got line tension and set plug at 12,040'. Line tension prior to setting plug 1367, line tension after plug set 1100, plug set time 36 seconds. Perf at 11,990'-994', 11,910' –914'. Max pressure 5750
	End Time 16:15  End Time 17:45

#### **Summary Rig Activity**

tart Time	22:30	End Time	00:00	Comment Frac stg #341, Global Kick Outs set at 9500 psi. Pressure tested to 10500 psi. Job pumped with Fresh Water.
	22.00		00.00	
				2. Protechnics pumped 11 cups of CFT2500
				3. Pumped 5 ppg max proppant concentration design with 10,000 lbs of 100 Mesh.
				4. Cut proppant ~10,000 lbs early due to pressure turning up during 5 ppg.
				5. Well was successfully flushed without dropping any rate.
				Ball Seat Stage Pressures and Rate: 5810 psi @ 15.4 bpm , 5222 psi Pressure before Seating , 5810 psi Pressure after Seating WG-36-3.6% (43.5 ), BC-200-4.4% (4.1 ),
				MC S-2010T-4.8% (1.8 ) Vicon NF-4.5% (5.6 ), Losurf 300D-4.8% (3.6 )
				CLA-Web-4.8% (3.6 ), BE-9-4.8% (1.1 )
port Start Date 8/24/2014	Report End Date 8/25/2014	24hr Activity Summary		
rt Time		End Time		Comment
	00:00		02:15	Plug and Perf Stage #35 RIH with guns and plug to KOP. Pump down guns at 14 bpm at 5750 psi at 264 fpm, 765 LTEN, pumped guns to 11,895'. Pulled up and got line tension and set plug at 11,875'. Line tension prior to setting plug 1320, line tension after plug set 1150, plug set time 23 seconds. Perf at 11,820'-824', 11,810' –814'. Max pressure 575 psi. Max rate 14 bpm. Pump 165 bbl water. Currently POOH with guns.
art Time	02:15	End Time	03:30	Comment Frac stg #35 1. Global Kick Outs set at 9500 psi. Pressure tested to 10500 psi. Job pumped with Fresh Water 2. Protechnics pumped 11.5 cups of CFT2500
				3. Pumped 5 ppg Max Proppant Concentration Design with 10,000 lbs of 100 Mesh.  4. Cut sand with during 5 ppg when pressure began rising with 3 ppg on formation.  5. Pressured out with ~90 bbls left flush. Ball Seat Stage Pressures and Rate: 5456 psi @ 14.6 bpm , 5108 psi Pressure before Seating , 5436 psi Pressure after Seating. BC-200-3% (2.9 ),Losurf 300D-2.5% (1.8 )CLA-Web-2.5% (1.8 ),  74.7% OF THE DESIGNED PROPPANT WAS PLACED IN THE FORMATION.
				76,590 LBS OF PROPPANT PLACED IN THE FORMATION. 14,810 LBS OF PROPPANT LEFT IN CASING.
art Time	03:30	End Time	05:00	Comment Flowed back the well on at 7.5bpm @ 2500psi. on a 24/64 choke
irt Time	05:00	End Time	07:00	Comment Pump 721 bbl sweep.



art Time		End Time	Comment
	07:00	09:00	Plug and Perf Stage #36 RIH with guns and plug to KOP. Pump down guns at 10 bpm at 8996 psi at 271 fpm, 538 LTEN, pumped guns to 11,768'. Pulled up and got line tension and set plug at 11,670'. Line tension prior to setting plug 1146, line tension after plug set 1007, plug set time 52 seconds. Perf at 11,585'-589', 11,451' - 455'. Max pressure 9200 psi. Max rate 12 bpm. Pump 184 bbl water. POH. All shots fired. All tools recovered.
art Time	09:00	End Time 10:30	Comment Frac stage #36. 1. Global Kick Outs set at 9500 psi. Pressure tested to 10500 psi. Job pumped with Fresh Water . 2. Protechnics pumped 11 cups of CFT2500 3. Good job with no issues, placed completely. Bal Seat Stage Pressures and Rate: 5035 psi @ 14.9 bpm , 5000 psi Pressure before Seating , 5035 psi Pressure after Seating WG-36-4.3% (53.3), BC-200-4.4% (4.2), (7.8), Losurf 300D-4.5% (4.7) CLA-Web-4.5% (4.7),
rt Time	10:30	End Time 12:30	Comment Plug and Perf stage #37 RIH with guns and plug to KOP. Pump down guns at 14 bpm at 5189 psi at 260 fpm, 846 LTEN, pumped guns to 11,443'. Pulled up and got line tension and set plug at 11,380'. Line tension prior to setting plug 1423, line tension after plug set 1166, plug set time 50 seconds. Perf at 11,290'-294', 11,160' - 164'. Max pressure 5211 psi. Max rate 14 bpm. Pump 122 bbl water. POH. All shots fired. All tools recovered.
rt Time	12:30	End Time 14:30	Comment Frac stage #37, 1. Global Kick Outs set at 9500 psi. Pressure tested to 10500 psi. Job pumped with Fresh Water . 2. Protechnics pumped 9 cups of CFT2000 3. Trouble bringing MO-67 on, reduced rate and extended Xlink pad stage until add lined out. 4. No other issues, overall good job. Placed completely. Ball Sea Stage Pressures and Rate: 5650 psi @ 14.8 bpm , 5100 psi Pressure before Seating , 5620 psi Pressure after Seating WG-36-5.3% (74.3), Vicon NF-4.2% (5.7), Losurf 300D-3.7% (2.9)
rt Time	14:30	End Time 16:30	Comment Plug and Perf stage #38 RIH with guns and plug to KOP. Pump down guns at 14 bpm at 5179 psi at 257 fpm, 834 LTEN, pumped guns to 11,086'. Pulled up and got line tension and set plug at 11,045'. Line tension prior to setting plug 1386, line tension after plug set 1144, plug set time 48 seconds. Perf at 10,977'-981', 10,865' - 869'. Max pressure 5230 psi. Max rate 14 bpm. Pump 107 bbl water. POH. All shots fired. All tools recovered.
rt Time	16:30	End Time 18:00	Comment Frac stage #38 1. Global Kick Outs set at 9500 psi. Pressure tested to 10500 psi. Job pumped with Fresh Water. 2. Protechnics pumped 10 cups of CFT2000 3. Good job with no issues, placed completely. Ball Seat Stage Pressures and Rate: 6335 psi @ 14.9 bpm , 5415 psi Pressure before Seating , 6315 psi Pressure after Seating, WG-36-3.9% (50.6 ), Losurf 300D-4.1% (3.1 )
rt Time	18:00	End Time 19:30	Comment Grease frac stack
rt Time	19:30	End Time 21:30	Comment Plug and Perf stage #39 RIH with guns and plug to KOP. Pump down guns at 14 bpm at 5,717 psi at 263 fpm, 810 LTEN, pumped guns to 10,852'. Pulled up and got line tension and set plug at 10,800'. Line tension prior to setting plug 1,247, line tension after plug set 1,056, plug set time 30 seconds. Perf at 10,750'-54', 10,740' - 44'. Max pressure 5,717 psi. Max rate 14 bpm. Pump 93.37 bbl water.



Start Time		End Time	
	21:30	00:00	Comment Frac stage #39  1. Global Kick Outs set at 9500 psi. Pressure tested to 10500 psi. Job pumped with Fresh Water 2. Protechnics pumped 11 cups of CFT2000 3. Pumped 5 ppg Max proppant concentration design with 10,000 lbs of 100 Mesh. 4. Pressure turned with 3 ppg during 4 ppg on surface and screws were cut. 5. Well was successfully flushed. Ball Seat Stage Pressures and Rate: 5328 psi @ 14.8 bpm , 5018 psi Pressure before Seating , 5324 psi Pressure after Seating WG-36-7% (80.8 ), BC-200-2.9% (2.5 ), Scalesorb 7-34.1% (25.4 ), Vicon NF-5.7% (6.8 ), Losurf 300D-2.7% (1.9 ) CLA-Web-2.7% (1.9 ) RE-9.5% (1.9 )
eport Start Date	Report End Date 24hr Act	ivity Summary	(1.9), CLA-Web-2.7% (1.9), BE-9-5% (1)
8/25/2014		nd Frac stages 40, 41, 42, 43, 44	
tart Time		End Time	Comment
tart Time	00:00	02:30	Plug and Perf stage #40 RIH with guns and plug to KOP. Pump down guns at 11 bpm at 8,682 psi at 178 fpm, 780 LTEN, pumped guns to 10,642'. Pulled up and got line tension and set plug at 10,630'. Line tension prior to setting plug 1,270, line tension after plug set 1,111, plug set time 60 seconds. Perf at 10,560'-64', 10,410' - 14'. Max pressure 8,682 psi. Max rate 11 bpm. Pump 164.74 bbl water. shut down for lighting and rain over location.
art Time	02:30	04:30	Frac stage #40  1. Global Kick Outs set at 9500 psi. Pressure tested to 10500 psi. Job pumped with Fresh Water .  2. Protechnics pumped 11 cups of CFT2000  3. Pumped 5 ppg Max Proppant Concentration design with 10,000 lbs of 100 Mesh.  4. Stage went well with all proppant placed.  Ball Seat Stage Pressures and Rate: 6325 psi @ 15 bpm , 5832 psi Pressure before Seating , 6325 psi Pressure after Seating, WG-36-5.8% (72 ), BC-200-4% (3.8 ), MC S-2010T-5.3% (1.9 ) Vicon NF-4.8% (6 ), Losurf 300D-4.4% (3.2 )
art Time	04:30	End Time 06:30	Comment Plug and Perf stage #41 RIH with guns and plug to KOP. Pump down guns at 14 bpm at 5,192 psi at 262 fpm, 810 LTEN, pumped guns to 10,271'. Pulled up and got line tension and set plug at 10,255'. Line tension prior to setting plug 1,370, line tension after plug set 1,070, plug set time 75 seconds. Perf at 10,161'-65', 9,965' - 69'. Max pressure 5,192 psi. Max rate 14 bpm. Pump 65.93 bbl water.
art ime	06:30	End Time 08:15	Comment
art Time		End Time	Repair chemical pump,
	08:15	10:15	Frac stage #41. 1. Global Kick Outs set at 9500 psi. Pressure tested to 10500 psi. Job pumped with Fresh Water. 2. Protechnics pumped 12 cups of CFT2100 3. Pumped 5 ppg Max Proppant Concentration design with 10,000 lbs of 100 Mesh. 4. Problems with CL-31 LA pump, shutdown to fix. Down approx 1:40hrs. 5. No issues getting back into interval, placed job completely. Ball Seat Stage Pressures and Rate: 5611 psi @ 14.99 bpm, 5085 psi Pressure before Seating, 5611 psi Pressure after Seating  WG-36-4.9% (69), BC-200-5% (5.4), Vicon NF-4.7% (6.4), Losurf 300D-4.7% (3.6) CLA-Web-4.7% (3.6), BE-9-4.8% (1.1)



Start Time			
	10:15	End Time 12:00	Plug and Perf stage #42 RIH with guns and plug to KOP. Pump down guns at 14 bpm at 5728 psi at 248 fpm, 831 LTEN, pumped guns to 9,912'. Pulled up and got line tension and set plug at 9,885'. Line tension prior to setting plug 1,295, line tension after plug set 1,110, plug set time 63 seconds. Perf at 9,830'-834', 9,715' - 719'. Max pressure 5,737 psi. Max rate 14 bpm. Pump 49 bbl water. POH. All guns fired. All tools recovered.
Start Time	12:00	End Time 12:15	Comment
Start Time	12:15	End Time 13:30	Safety stand down. Topics- don't get in a hurry, three point contact, slips trips and falls.  Comment Frac stage #42. 1. Global Kick Outs set at 9500 psi. Pressure tested to 10500 psi. Job pumped with Fresh Water . 2. Protechnics pumped 11 cups of CFT2300 3. Pumped 5 ppg Max Proppant Concentration design with 10,000 lbs of 100 Mesh. 4. Good job with no issues, placed completely. Ball Seat Stage Pressures and Rate: 5630 psi @ 14.8 bpm , 5080 psi Pressure before Seating , 5640 psi Pressure after Seating WG-36-4% (50.3 ), Losurf 300D-4.2% (3 )
tart Time	13:30	End Time 14:30	Comment Plug and Perf stage #43 RIH with guns and plug to KOP. Pump down guns at 14 bpm at 4949 psi at fpm, 867 LTEN, pumped guns to 9,712'. Pulled up and got line tension and set plug at 9,678'. Line tension prior to setting plug 1,227, line tension after plug set 1,050, plug set time 38 seconds. Perf at 9,595'-9599', 9,500' - 504'. Max pressure 4995 psi. Max rate 14 bpm. Pump 38 bbl water. POH. All shots fired. All tools recovered.
art Time	14:30	End Time 17:00	Comment Frac stage #43. 1. Global Kick Outs set at 9500 psi. Pressure tested to 10500 psi. Job pumped with Fresh Water . 2. Protechnics pumped 12 cups of CFT2300 3. Pumped 5 ppg Max Proppant Concentration design with 10,000 lbs of 100 Mesh.4. Pressure started increasing at the start of 5ppg stg, 3.0ppg on bottom. 5. Continued to rise during flush, dropped rate to control pressure. Able to get flushed, extended flush to ensure WL could get down. 6. Able to place job completely. Ball Seat Stage Pressures and Rate: 6185 psi @ 14.8 bpm , 5195 psi Pressure before Seating , 6195 psi Pressure after Seating WG-36-3.2% (40.7), BC-200-4.9% (4.8), MC S-2010T-3.6% (1.3) Losurf 300D-5% (3.6) CLA-Web-5% (3.6),
art Time	17:00	End Time 18:00	Comment SD-lightning.
ut Time	18:00	End Time 20:00	Comment Plug and Perf stage #44 RIH with guns and plug to KOP. Pump down guns at 12 bpm at 7,677 psi at fpm, 810 LTEN, pumped guns to 9,487'. Pulled up and got line tension and set plug at 9,480'. Line tension prior to setting plug 1,408, line tension after plug set 1,069, plug set time 62 seconds. Perf at 9,460'-64', 9,370' - 74'. Max pressure 7,677 psi. Max rate 12 bpm. Pump 32.63 bbl water. Wait on lighting to pass, Live gun inhole.
art Time	20:00	End Time 21:30	Comment



Start Time		End Time		Comment
	21:30		00:00	Frac #44  1. Global Kick Outs set at 9500 psi. Pressure tested to 10500 psi. Job pumped with Fresh Water.  2. Protechnics pumped 12 cups of CFT2300  3. Pumped 5 ppg Max Proppant Concentration design with 10,000 lbs of 100 Mesh.  4. Had trouble getting a good crosslink. Shut down during pad 2 times to troubleshoot issue.  5. Issue was found with the CL-31 injection port.  6. Well was successfully flushed.  Ball Seat Stage Pressures and Rate: 7473 psi @ 13.4 bpm , 6459 psi Pressure before Seating , 7455 psi Pressure after Seating  CL-31-5.1% (1.1 ), MC S-2010T-3.4% (1.6 ) Vicon NF-3 4% (5.6 ) Logurf 300D-3.4% (3.1 )
eport Start Date	Report End Date	24hr Activity Summary		Cat 3/4-5.4% (2 ), CLA-Web-4.5% (4.1 ),
8/26/2014	8/27/2014	Continue to RDMO frac equip.	ND/NU BOP's and test	t same.
art Time	00.00	End Time		Comment
tart Time	00:00		02:30	Kill plug #1 RIH with plug to 8,330'. Pulled up and got line tension and set plug at 8,300'. Line tension prior to setting plug 1,530, after plug set 1,350. Plug set time 40 seconds. Bleed off pressure to 0 Psi, Plug holding. POH with tools, all tools recovered. Kill plug #2 RIH with plug to 8,280'. Pulled up and got line tension and set plug at 8,250'. Line tension prior to setting plug 1,690, after plug set 1,530. Plug set time 72 seconds. Bleed off pressure to 0 Psi, Plug holding. POH with tools, all tools recovered.
art time	02:30	End Time	03:30	Comment. RDMO JW Wireline and Howco frac equipment.
art Time		End Time		Comment
art Time	03:30		12:30	ND Frac stack, NU BOP's, Continue to RDMO Howco frac equip. Tear down and MO water manifold.
art rime	12:30	End Time	16:30	Comment MIRU Nabors WOR. Spot in and RU pumps. Spot in swab tanks. Inspect tbg.
art Time	10.00	End Time		Comment
art Time	16:30		20:00	Wait on snubbing unit.
art time	20:00	End Time	00:00	Comment Shut Down for Night, Wait on daylight.
port Start Date	Report End Date	24hr Activity Summary		Ond: Bown for Night, wait on daylight.
8/27/2014	8/28/2014	Finish MIRU of WOR & Snubbi	ng unit, Drill out plugs	
art Time	00:00	End Time	07:00	Comment CDENI Walking and April 14
art Time	00,00	End Time	07:00	SDFN, Waiting on daylight
	07:00	LIO TIME	09:00	Comment Hold PJSM, Spot in & Rig up Rogue Snubbing Unit
art Time	09:00	End Time	11:00	Comment R/U B&C Quick Test, Pressure test Snubbing unit BOP'S, lower 2 3/8" pipe rams, & upper 2 3/8" pipe ram, 250 psi low / 10,000 psi high, Hydraulic Annular 250 psi low / 3500 psi high
art Time	11:00	End Time	40.00	Comment
rt Time	11.00	677	13:00	Spot in hydraulic catwalk, pipe racks, tally 2 3/8" 5.96# P-110 PH-6 Workstring
rt Time	13:00	End Time	18:00	M/U BHA, 4.625" OD, 4-blade concave inserted mill, 2 3/8" PH-6 B X 2 3/8" PAC B Double flapper bit sub, 1 Jt. 2 3/8" 5.96# P110 PH-6 tbg., 1.56" ID "RN"- Nipple, P/U 2 3/8" PH-6 tbg. (circulating hole w/H2O every 1000', installing 1.710" ID "R" Nipple every 5000')
arr time:	18:00	End Time	00:00	Comment M/U BHA, 4.625" OD, 4-blade concave inserted mill, 2 3/8" PH-6 B X 2 3/8" PAC B Double flapper bit sub, 1 Jt. 2 3/8" 5.96# P110 PH-6 tbg., 1.56" ID "RN"- Nipple, 2 3/8" PH-6 tbg to surface. Tagged kill plug @ 8,250' 268 jts.



Daily Operation	ns		
Report Start Date	Report End Date	24hr Activity Summary	
8/28/2014	8/29/2014	Drill out Kill plugs, and frac plugs 43, 42, 41	
Start Time		End Time	Comment
	00:00	01:30	Tagged Kill plug @8,250' with 268 jts, Tie back drill lines, PU swivel,
Start Time		End Time	Comment
	01:30	03:30	Tie back drill lines, PU swivel, While rigging up static lines for swivel we found the swivel's static lines rubbing th
			Idrill line, Tried to arrange lines so as not to rub together, but unable to keep them from rubbing. Called in and
			reported the problems, Shut down drill out operations to fix problems with wirelines. Will lay derrick down and
			weld new eyelets on crown of derrick on outer sides of crown sheaves, So as not to rub together and cut one or
			the other line while drill out plugs.
Start Time		End Time	Comment
	03:30	07:00	Shut down and wait on daylight to lower derrick and fix problem with the eyelets for static line for swivel, Will well
			on new eyelets on crown.
Start Time		End Time	Comment
	07:00	11:00	Lower derrick, fix problem with the eyelets for static line for swivel, Raise derrick
tart Time		End Time	Comment
	11:00	15:00	P/U Power swivel, R/U Pump, establish circulation, drill out kill plug #2 @ 8250', jt. #268, 40K up wt. 30K down
			wt., 34K neutral wt., 1400 psi free torque, 1700 psi drill torque, 4 pts. WOB, 120 RPM., 2.5 BPM in @ 2500 psi.
			2.5 bbl out @ 2100 psi on 20/64" choke, 23 minutes to drill plug
			Kill plug #1: @ 8300', jt. #270, 40K up wt. 30K down wt., 34K neutral wt., 1400 psi free torque, 1700 psi drill
			torque, 4 pts. WOB, 120 RPM, , 2.5 BPM in @ 3200 psi, 2.5 bbl out @ 3400 psi on 20/64" choke, 33 minutes to
			drill plug
A1550 115111 - 155 2			Circulate bottoms up 170 bbls.
tart Time	45.00	End Time	Comment
	15:00	18:00	P/U 38 Jts. 2 3/8" PH-6 tbg. t/plug # 43 @ 9480'
tart Time	10.00	End Time	Comment
	18:00	19:30	Tagged plug # 43 at 9,482' on jt # 308, Up weight 34, down weight 32, neutral 33. 1,500 free torque, 1,700 drill
			torque. WOB: 6-8 pts, RPM @ 120. 2.5 bbl in @ 4,000 psi, 2.7 bbl out @2,950 psi on 22" choke. 41 minutes to
			drill plug.
tart Time		Carl Time:	Pumped 10 bbls water with ¾ gal of vendor\chemical to 1,000 gals. Pumped 10 bbl gel sweep.
COLUMN TO THE	19:30	End Time 20:30	Comment Change rig transmission filters
tart Time	15.50	End Time	Comment
SAN MINE	20:30	22:30	Tagged plug # 42 at 9,682' on jt # 314, Up weight 35, down weight 32, neutral 33. 1,450 free torque, 1,900 drill
	20.00	22.50	torque, WOB:6-8 pts, RPM @ 120. 2.5 bbl in @ 4,000 psi, 2.7 bbl out @3,000 psi on 23" choke. 25 minutes to
	9		Idrill plug.
			Pumped 10 bbls water with 3/4 gal of vendor\chemical to 1,000 gals. Pumped 10 bbl gel sweep.
art Time		End Time	Comment
	22:30	23:30	P/U 7 Jts. 2 3/8" PH-6 tbg. t/plug # 41 @ 9,891'
			Tagged plug # 41 at 9,891' on jt # 321, Up weight 35, down weight 34, neutral 43. 1,500 free torque, 1,700 drill
			tornio WOP 6 pro DDM 6 120 . 2.5 bbl 6 2 200 at 2.7 bbl at 60 cm - 2.7
			torque. WOB:6-8 pts, RPM @ 120. 2.5 bbl in @ 3,900 psi, 2.7 bbl out @2,950 psi on 20" choke. 20 minutes to drill plug.
			Pumped 10 bbls water with 3/4 gal of vendor\chemical to 1,000 gals. Pumped 10 bbl gel sweep.
art Time		End Time	Comment
001 U.Y. 1977/7	23:30	00:00	Working on snubbing units slips and leaking bag.
			Tribining on anaboung units superating bag.



Daily Operation	is .		
eport Start Date 8/29/2014		ctivity Summary iir leaking bag, Drill out frac plugs.	
tart Time	00:00	End Time 02:00	Comment Working on leaking bag, and slips, broken line on slips.
tart Time	02:00	End Time 06:00	Comment Circulate well from10,158', for clean up. plug cuttings in returns, small amount of sand in samples, continue to circulate clean.
tart Time	06:00	End Time 10:00	Comment Hold PJSM, Install TIW valve, land tubing on rams, change out snubbing unit annular bag
tart Time	10:00	End Time 10:30	Comment P/U Power swivel, rig up pump, establish circulation
art Time	10:30	End Time 17:00	Comment Drill out: Tagged plug #_40_ at _10,255' on jt #333, Up weight 39, down weight 33, neutral 34  1400 free torque, _2200 drill torque. WOB: _4 pts, RPM @_ 120 2.2 bbl in @
art Time	17:00	End Time	Comment Circulate bottoms up 230 bbls.



Start Time	End Time	IC				
18:00	22:30	Comment Tagged plug # 35 at 11,674' on jt # 378, Up weight 38, down weight 31, neutral 33. 1,700 free torque, 1,900 drill torque. WOB: 6-8 pts, RPM @ 120. 2.5 bbl in @ 4,000 psi, 2.5 bbl out @3,250 psi on 18" choke. 34 minutes to drill plug. Pumped 10 bbls water with 3/4 gal of vendor\chemical to 1,000 gals. Pumped 10 bbl gel sweep. P/U 7 Jts. 2 3/8" PH-6 tbg. Tag plug # 34 @ 11,875'.  Tagged plug # 34 at 11,875' on jt # 385, Up weight 39, down weight 32, neutral 33. 1,700 free torque, 2,100 drill torque. WOB: 6-8 pts, RPM @ 120. 2.5 bbl in @ 4,000 psi, 2.5 bbl out @3,250 psi on 16" choke. 61 minutes to drill plug. Pumped 10 bbls water with 3/4 gal of vendor\chemical to 1,000 gals. Pumped 10 bbl gel sweep. P/U 5 Jts. 2 3/8" PH-6 tbg. Tag plug # 33 @ 12,040'.  Tagged plug # 33 at 12,040' on jt # 390, Up weight 39, down weight 32, neutral 33. 1,500 free torque, 2,000 drill torque. WOB: 6-8 pts, RPM @ 120. 2.5 bbl in @ 4,000 psi, 2.5 bbl out @3,300 psi on 16" choke. 35 minutes to drill plug.  Pumped 10 bbls water with 3/4 gal of vendor\chemical to 1,000 gals. Pumped 10 bbl gel sweep. P/U 9 Jts. 2 3/8" PH-6 tbg Tag plug # 32 @ 12,300'.				
Start Time 22:30	End Time 00:00	Comment Tagged plug # 32 at 12,303' on jt # 399, Up weight 38, down weight 31, neutral 33. 1,700 free torque, 2,000 drill torque. WOB: 6-8 pts, RPM @ 120. 2.5 bbl in @ 4,000 psi, 2.5 bbl out @3,350 psi on 10" choke. 45 minutes to drill plug. Pumped 10 bbls water with 3/4 gal of vendor\chemical to 1,000 gals. Pumped 10 bbl gel sweep. P/U 6 Jts. 2 3/8" PH-6 tbg. Tag plug # 43 @ 12,510'  Tagged plug # 31 at 12,510' on jt # 405, Up weight 38, down weight 31, neutral 33. 1,750 free torque, 2,100 drill torque. WOB: 6-8 pts, RPM @ 120. 2.5 bbl in @ 4,300 psi, 2.7 bbl out @3,200 psi on 18" choke. 44 minutes to drill plug. Pumped 10 bbls water with 3/4 gal of vendor\chemical to 1,000 gals. Pumped 10 bbl gel sweep. P/U 7 Jts. 2 3/8" PH-6 tbg. Tag plug # 43 @ 12,720" on jt #412, Up weight 38, down weight31, neutral 33. 1800 free torque, 2100 drill torque. WOB: 4 pts, RPM @ _120. 2.5 bbl in @ _4000_psi, 2.5 bbl out @3300_psi on 20/64_" choke. 43 minutes to drill plug. Pumped _107_ bbls water with 3/4 gal of vendor\chemical to1000 gals. Pumped 10 bbl gel sweep.  Drill out: Tagged plug #29 at 12,920" on jt #420, Up weight 36, down weight31, neutral33. 1700 free torque, 2200 drill torque. WOB: 4 pts, RPM @ 120. 2.5 bbl in @ 4000_psi, 2.6_ bbl out @_3300 psi on 20/64_" choke. 33 minutes to drill plug.  Pumped 82.5 bbls water with 3/4 gal of vendor\chemical to 1000 gals. Pumped _10_ bbl gel sweep.  Drill out: Tagged plug #28 at 13,126' on jt #425, Up weight36, down weight31, neutral 331800 free torque, 2200 drill torque. WOB: _4 pts, RPM @ _120. 2.5_ bbl in @ 4000_psi, _2.5_ bbl out @_3300_psi on 20/64_" choke. 33 minutes to drill plug.  Pumped 32.5 bbls water with 3/4 gal of vendor\chemical to 1000 gals. Pumped _10_ bbl gel sweep.				



Daily Operations					
Report Start Date Report End Date 24hr Activity Sum	nmary				
8/30/2014 8/31/2014 Drill out frac					
Start Time 00:00	End Time 02:00	Comment Circulating bottoms up from 12,510', 220 bbls. With two 10 bbls sweeps.			
Start Time 02:00	End Time 08:00	Comment Drill out: Tagged plug #_27_ at 13,330" on jt #432, Up weight 38, down weight30, neutral33.1700 free torque, 2500_ drill torque. WOB: _4 pts, RPM @ _1202.5_ bbl in @ _4100_psi, _3 bbl out @_3400 psi on _20/64 " choke. 30 minutes to drill plug. Pumped75 bbls water with 3/4_ gal of vendor\chemical to _1000 gals. Pumped 10 bbl gel sweep.			
Start Time	End Time	Drill out: Tagged plug #_26_ at 13,500" on jt #438, Up weight 37, down weight _31, neutral _331600 free torque, 2600_ drill torque. WOB:4_ pts, RPM @ 1202.2 bbl in @ _4100_psi, _2.5 bbl out @ _3300 psi on _20/64" choke. 27 minutes to drill plug. Pumped 87 bbls water with _3/4 gal of vendor\chemical to _1000 gals. Pumped _10_ bbl gel sweep.			
08:00	09:30	Circulate bottoms up 280 bbls.			
Start Time 09:30	End Time 16:00	Comment Drill out: Tagged plug #25 at 13,750" on jt #446, Up weight _38, down weight _31, neutral _341900 free torque, 2600 drill torque. WOB: _4_ pts, RPM @ _1202.25 bbl in @ 3900 psi, _2.5 bbl out @3300 psi on 20/64" choke. 72 minutes to drill plug. Pumped 172 bbls water with 3/4 gal of vendor\chemical to1000 gals. Pumped 10 bbl gel sweep.  Drill out: Tagged plug #24 at _13,953' on jt #_452, Up weight 39, down weight _30, neutral 34. 1700 free torque, 2500 drill torque. WOB: _4 pts, RPM @ _1202.2 bbl in @ 3800 psi, 2.5 bbl out @3300 psi on _20/64" choke. 36 minutes to drill plug. Pumped 80_ bbls water with _3/4_ gal of vendor\chemical to _1000 gals. Pumped _10_ bbl gel sweep.  Drill out: Tagged plug #_23 at 14,207' on jt #460, Up weight _38, down weight 30, neutral 33. 1700 free torque, 2700 drill torque. WOB: _4 pts, RPM @ _1202.2 bbl in @ 4000 psi, _2.5_ bbl out @_3300 psi on 20/64" choke. 50 minutes to drill plug. Pumped 126 bbls water with 3/4 gal of vendor\chemical to 1000 gals. Pumped 10 bbl gel sweep.  Drill out: Tagged plug #_22 at 14,450' on jt #468, Up weight 38, down weight 32, neutral 341800 free torque, _2600 drill torque. WOB: _4 pts, RPM @ _1202.2 bbl in @ _3900 psi, _2.5 bbl out @_3300 psi on 20/64" choke. 42 minutes to drill plug. Pumped 100 bbls water with _3/4 gal of vendor\chemical to 1000 gals. Pumped 10 bbl gel sweep.  Drill out: Tagged plug #21 at 14,639' on jt #475, Up weight 38, down weight 31, neutral 34. 1800 free torque, 2700 drill torque. WOB: 4 pts, RPM @ 1202.2 bbl in @ 4200 psi, _2.5 bbl out @ 3300 psi on 18/64" choke. 29 minutes to drill torque. WOB: 4 pts, RPM @ 1202.2 bbl in @ 4200 psi, _2.5 bbl out @ 3300 psi on 18/64" choke. 29 minutes to			
		drill plug. Pumped 64 bbls water with 3/4 gal of vendor\chemical to1000 gals. Pumped 10 bbl gel sweep.			



Start Time		End Time	Comment
	16:00	17:3	Circulate bottoms up 300 bbls.
start Time	17:30	End Time 00:0	Comment Tagged plug # 20 at 14,870' on jt # 482, Up weight 38, down weight 31, neutral 34. 1,800 free torque, 2,300 dritorque. WOB: 6-8 pts, RPM @ 120. 2.5 bbl in @ 4,000 psi, 2.5 bbl out @3,300 psi on 25" choke. 36 minutes to drill plug. Pumped 10 bbls water with 3/4 gal of vendor\chemical to 1,000 gals. Pumped 10 bbl gel sweep. P/U 6 Jts. 2 3/8" PH-6 tbg. Tag plug # 19 @ 15,080'
			Tagged plug # 19 at 15,080' on jt # 488, Up weight 38, down weight 31, neutral 34. 1,900 free torque, 2,200 dril torque. WOB: 6-8 pts, RPM @ 120. 2.5 bbl in @ 4,100 psi, 2.5 bbl out @3,300 psi on 25" choke. 25 minutes to drill plug.  Pumped 10 bbls water with 3/4 gal of vendor\chemical to 1,000 gals. Pumped 10 bbl gel sweep.  P/U 7 Jts. 2 3/8" PH-6 tbg. Tag plug # 18 @ 15,306'
			Tagged plug # 18 at 15,306' on jt # 496, Up weight 40, down weight 31, neutral 34. 2,000 free torque, 2,200 drit torque. WOB: 6-8 pts, RPM @ 120, 2,5 bbl in @ 4,000 psi, 2,5 bbl out @3,300 psi on 21" choke, 48 minutes to drill plug. Pumped 10 bbls water with 3/4 gal of vendor\chemical to 1,000 gals. Pumped 10 bbl gel sweep. P/U 6 Jts. 2 3/8" PH-6 tbg. Tag plug # 17 @ 15,483'
			Tagged plug # 17 at 15,483' on jt # 502, Up weight 40, down weight 31, neutral 34. 1,700 free torque, 2,100 dri torque. WOB: 6-8 pts, RPM @ 120. 2.5 bbl in @ 4,000 psi, 2.5 bbl out @3,300 psi on 24" choke. 61 minutes to drill plug. Pumped 10 bbls water with 3/4 gal of vendor\chemical to 1,000 gals. Pumped 10 bbl gel sweep. P/U 8 Jts. 2 3/8" PH-6 tbg. Tag plug # 16 @ 15,710'
			Tagged plug # 16 at 15,710' on jt # 509, Up weight 40, down weight 31, neutral 40. 1,800 free torque, 2,300 dri torque. WOB: 6-8 pts, RPM @ 120. 2.5 bbl in @ 4,000 psi, 2.5 bbl out @3,200 psi on 20" choke. 53 minutes to drill plug. Pumped 10 bbls wa
eport Start Date 8/31/2014		ctivity Summary out frac plugs,	
art Time	1 3	End Time	Comment
	00:00	02:0	Circulate bottoms up, 350 bbls.

#### **Summary Rig Activity**

Start Time 02:00	End Time 06:00	Comment Tagged plug # 15 at 15,910' on jt # 515, Up weight 40, down weight 31, neutral 40. 1,800 free torque, 2,300 drill torque. WOB: 6-8 pts, RPM @ 120. 2.5 bbl in @ 4,000 psi, 2.5 bbl out @3,200 psi on 20" choke. 53 minutes to drill plug. Pumped 10 bbls water with 3/4 gal of vendor\chemical to 1,000 gals. Pumped 10 bbl gel sweep P/U 7 Jts. 2 3/8" PH-6 tbg. Tag plug # 14 @ 16,110'  Tagged plug # 14 at 16,110' on jt # 522, Up weight 40, down weight 31, neutral 35. 2,200 free torque, 2,500 drill torque. WOB: 6-8 pts, RPM @ 120. 2.5 bbl in @ 3,900 psi, 2.5 bbl out @3,300 psi on 20" choke. 47 minutes to drill plug.  Pumped 10 bbls water with 3/4 gal of vendor\chemical to 1,000 gals. Pumped 10 bbl gel sweep sweepP/U 7 Jts. 2 3/8" PH-6 tbg. Tag plug # 13 @ 16,343'
		Tagged plug # 13 at 16,343' on jt # 529, Up weight 40, down weight 31, neutral 35. 2,200 free torque, 2,500 drill torque. WOB: 6-8 pts, RPM @ 120. 2.5 bbl in @ 3,900 psi, 2.5 bbl out @3,300 psi on 21" choke. 44 minutes to drill plug. Pumped 10 bbls water with 3/4 gal of vendor\chemical to 1,000 gals. Pumped 10 bbl gel sweep P/U 6 Jts. 2 3/8" PH-6 tbg. Tag plug # 12 @ 16,513'
		Tagged plug #12 at 16,513' on jt #536, Up weight 38, down weight 31, neutral36 . 2000 free torque, 2500 drill torque. WOB: 4 pts, RPM @ 120. 2.5 bbl in @4000 psi, _2.5 bbl out @3300 psi on 21/64" choke. 45 minutes to drill plug.  Pumped 112 bbls water with 3/4 gal of vendor\chemical to 1000 gals. Pumped 10 bbl gel sweep.
	, х	Drill out: Tagged plug #11 at16,723' on jt #542, Up weight 37, down weight 30, neutral 34. 2300 free torque, 2800 drill torque. WOB: 4 pts, RPM @ 120. 2.5 bbl in @ 4100 psi, 2.5 bbl out @3300 psi on 23/64" choke. 46 minutes to drill plug. Pumped 115 bbls water with 3/4 gal of vendor\chemical to 1000 gals. Pumped 10 bbl gel sweep.
Start Time 06:00	End Time 08:30	Comment Circulate bottoms up 340 bbls.



Start Time 08:30	End Time 16:00	Comment Drill out: Tagged plug #10 at 16,950 on jt 549 Up weight 39 down weight 31 neutral 34 free torque, _2200 drill torque. WOB: 4 pts, RPM @ 120 . 2.2 bbl in @ 4000 psi, 3.1 bbl out @3200 psi on 21 choke. 43 minutes to drill plug. Pumped 107 bbls water with 3/4 gal of vendor\chemical to 1000 gals. Pumped 10 bbl gel sweep.  Drill out: Tagged plug #9 at 17,120' on jt #554, Up weight 37 down weight 30 neutral 34, 2300 free torque, 2900 drill torque. WOB: 4 pts, RPM @ 120. 2.5 bbl in @ 4000 psi, 3 bbl out @3100 psi on 21/64" choke. 46 minutes to drill plug. Pumped 128 bbls water with3/4 gal of vendor\chemical to1000 gals. Pumped 10 bbl gel sweep.  Drill out: Tagged plug #8 at17,290' on jt #560, Up weight 39, down weight 30, neutral 34. 2400 free torque, 2900 drill torque. WOB: 4 pts, RPM @ 120. 2.5 bbl in @ 4000 psi, 2.5 bbl out @3300 psi on 21/64" choke. 33 minutes to drill plug. Pumped 83 bbls water with 3/4 gal of vendor\chemical to 1000 gals. Pumped 10 bbl gel sweep.  Drill out: Tagged plug #7 at 17,485' on jt #566, Up weight 40, down weight 32, neutral 34. 2500 free torque, 2900 drill torque. WOB: 4 pts, RPM @ 120. 2.5 bbl in @ 4000 psi, 2.5 bbl out @3300 psi on 21/64" choke. 27 minutes to drill plug. Pumped 68 bbls water with 3/4 gal of vendor\chemical to 1000 gals. Pumped 10 bbl gel sweep.
Start Time	End Time	Drill out: Tagged plug #6 at 17,650' on jt #571, Up weight 40, down weight 32, neutral 34. 2300 free torque, 2900 drill torque. WOB: 4 pts, RPM @ 120. 2.5 bbl in @ 4000 psi, 2.5 bbl out @ 3300 psi on 25/64" choke. 26 minutes to drill plug. Pumped 65 bbls water with 3/4 gal of vendor\chemical to 1000 gals. Pumped 10 bbl gel sweep.  Comment
16:00	18:00	Circulate bottoms up360 bbls.

#### **Summary Rig Activity**

art Time		End Time		Comment
	18:00		00:00	Tagged plug # 5 at 17,833' on jt # 578, Up weight 38, down weight 30, neutral 34, 2,500 free torque, 2,800 drill torque. WOB: 4 pts, RPM @ 120, 2.5 bbl in @ 4,000 psi, 2.5 bbl out @ 3,300 psi on 21/64" choke. 30 minutes to drill plug.  Pumped 65 bbls water with 3/4 gal of vendor\chemical to 1000 gals. Pumped 10 bbl gel sweep.  P/U 14 Jts. 2 3/8" PH-6 tbg. Tag plug # 4 @ 18,264' Tagged plug # 4 at 18,264' on jt # 591, Up weight 50, down weight 35, neutral 38. 2,500 free torque, 2,800 drill torque. WOB: 4 pts, RPM @ 120. 2.5 bbl in @ 4,200 psi, 2.5 bbl out @ 3,300 psi on 26/64" choke, 64 minutes to drill plug.  Pumped 65 bbls water with 3/4 gal of vendor\chemical to 1000 gals. Pumped 10 bbl gel swe.  P/U 8 Jts. 2 3/8" PH-6 tbg. Tag plug # 3 @ 18,512' Tagged plug # 3 at 18,512' on jt # 599, Up weight 50, down weight 35, neutral 38. 2,500 free torque, 2,900 drill torque. WOB: 4 pts, RPM @ 120. 2.5 bbl in @ 4,000 psi, 2.5 bbl out @ 3,300 psi on 25/64" choke. 44 minutes to drill plug.  Pumped 65 bbls water with 3/4 gal of vendor\chemical to 1000 gals. Pumped 10 bbl gel swe.  P/U 7 Jts. 2 3/8" PH-6 tbg. Tag plug # 2 @ 18,730' Tagged plug # 2 at 18,730' on jt # 606, Up weight 50, down weight 36, neutral 40. 2,200 free torque, 2,800 drill torque. WOB: 4 pts, RPM @ 120. 2.5 bbl in @ 4,500 psi, 2.5 bbl out @ 3,300 psi on 24/64" choke. 41 minutes to drill plug.  Pumped 65 bbls water with 3/4 gal of vendor\chemical to 1000 gals. Pumped 10 bbl gel swe.  P/U 7 Jts. 2 3/8" PH-6 tbg. Tag plug # 2 @ 18,730' Tagged plug # 2 at 18,730' on jt # 606, Up weight 50, down weight 36, neutral 40. 2,200 free torque, 2,800 drill torque. WOB: 4 pts, RPM @ 120. 2.5 bbl in @ 4,500 psi, 2.5 bbl out @ 3,300 psi on 24/64" choke. 41 minutes to drill plug.  Pumped 65 bbls water with 3/4 gal of vendor\chemical to 1000 gals. Pumped 10 bbl gel swe.  P/U 10 Jts. 2 3/8" PH-6 tbg. Tag plug # 1 @ 19,025'
ort Start Date 9/1/2014	Report End Date 9/2/2014	24hr Activity Summary POH laying down and Snubb	ing out	
9/1/2014 t Time	3/2/2014	End Time	ing out	Comment
	00:00		03:00	Tagged plug # 1 at 19,025' on jt # 616, Up weight 50 , down weight 36, neutral 40. 2,200 free torque, 2,800 drill torque, WOB: 4 pts, RPM @ 120, 2.5 bbl in @ 4,500 psi, 2.5 bbl out @ 3,300 psi on 20/64" choke, 64 minutes to drill plug.  Pumped 65 bbls water with 3/4 gal of vendor\chemical to 1000 gals. Pumped 10 bbl gel swe.  P/U 3 Jts. 2 3/8" PH-6 tbg. RSI @ 19,130'  RSI  Tagged RSI at 19,130' on jt # 619, Up weight 50 , down weight 36, neutral 40. 2,200 free torque, 2,800 drill torque. WOB: 4 pts, RPM @ 120. 2.5 bbl in @ 4,500 psi, 2.5 bbl out @ 3,300 psi on 20/64" choke.
t Time	03:00	End Time	07:30	Comment Circulate bottoms up 2.5 times, pump 870 bbls.
rt Time	07:30	End Time	18:00	Comment Lay down 5 jts. 2 3/8" PH-6 tbg. w/power swivel, (no drag), Rig down power swivel, TOOH Lay down 318 jts. 2 3/8" PH-6 work string t/9300'
t Time	18:00	End Time	20:00	Comment P/U Power swivel, rig up pump, circulate bottoms up
rt Time	20:00	End Time	22:30	Comment Continue to pull tbg to 5,554', SICP 3,600 Psi, Shut in well and shut down for night, Wait on daylight to finish snubbing out of hole. Pull maintenance on equipment and monitor well TOOH Lay down 439 jts. 2 3/8" PH-6 work string to 5,554', (shut in pressure 3,600 Psi)
rt Time	22:30	End Time	00:00	Comment Wait on daylight to finish snubbing out of hole. Pull maintenance on equipment and monitor well.
ort Start Date 9/2/2014	Report End Date 9/3/2014	24hr Activity Summary Snub tbg out of hole, Change	rams, RIH prod string	
rt Time	00:00	End Time	07:30	Comment Wait on daylight to snubbing out of hole. Pull maintenance on equipment and monitor well. Steamed off BOP &

#### **Summary Rig Activity**

Start Time		End Time		Comment
	07:30		13:00	Hold PJSM, Snub out of hole with 180 jts. 2 3/8" PH-6 workstring, lay down BHA, Shut well in, (Mill in fair condition)
art Time		End Time		Comment
	13:00		16:00	Change over from/2 3/8" - to/2 7/8", (pipe rams, slipdies, handling equipment, ETC.)
tart Time	16:00	End Time	18:30	Comment Pressure test BOP (bottom & top pipe rams) 250 psi low /10,000 psi high, Snubbing Unit (bottom & top pipe rams) 250 psi low/ 10,000 psi high & Annular bag t/3500 psi)
tart Time	18:30	End Time	00:00	Comment M/U BHA, 2 7/8" Notched collar (.44'), 2 7/8" 6.5# L-80 EUE Pup jt (2.10'), 2 7/8" 6.5# L-80 EUE Perf sub (4.14') Weatherford 10k ceramic burst disc (.79'), 2 7/8" XN Nipple (2.313" ID w/2.205" no-go) (1.25'), 1 jt. 2 7/8"6.5# L- 80 EUE Tubing (32.32'), 2 7/8" X Nipple (2.313" ID) (1.18'), 268 jts of 2 7/8"6.5# L-80 EUE Tubing (8641.71') to surface, Tbg hanger( .50'). EOT @ 4870.81' at report time.
Report Start Date	Report End Date	24hr Activity Summary		
9/3/2014	9/4/2014	Snub in tbg, hang off, ND Sn	ubbing unit, NUtree, PO	P
art Time	00:00	End Time	04:30	Comment Finish M/U BHA, 2 7/8" Notched collar (.44'), 2 7/8" 6.5# L-80 EUE Pup jt (2.10'), 2 7/8" 6.5# L-80 EUE Perf sub (4.14'), Weatherford 10k ceramic burst disc (.79'), 2 7/8" XN Nipple (2.313" ID w/2.205" no-go) (1.25'), 1 jt. 2 7/8"6.5# L-80 EUE Tubing (32.32'), 2 7/8" X Nipple (2.313" ID) (1.18'), 268 jts of 2 7/8"6.5# L-80 EUE Tubing (8641.71') to surface, Tbg hanger( .50'). EOT @ 8,711.41',
art Time	04:30	End Time	05:00	Comment Landed tubing hanger, EOT @ 8,711.43'
art Time	05:00	End Time	10:00	Comment ND snubbing unit, ND BOP's, NU Well Head.
tart Time	10:00	End Time	10:30	Comment Rig up B&C Quick Test, Pressure test Production tree 10,000 psi,
tart Time	10:30	End Time	11:00	Comment R/U Cameron lube out 2-way check
tart Time	11:00	End Time	11:30	Comment Rig down Nabors Rig #1425, lower derrick, MIRU on Ute Tribal 14-9-4-3-2 WH
tart Time	11:30	End Time	12:00	Comment Rig up pump, pressure up on tubing, burst disc 3800#, pump tubing volume 50 bbls.
tart Time	12:00	End Time	12:30	Comment Production foreman on location, turn well over to production

	STATE OF UTAH		FORM 9				
	DEPARTMENT OF NATURAL RESOURCE DIVISION OF OIL, GAS, AND MINI		5.LEASE DESIGNATION AND SERIAL NUMBER: 1420H626269				
SUNDF	6. IF INDIAN, ALLOTTEE OR TRIBE NAME:						
current bottom-hole depth,	Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.						
1. TYPE OF WELL Oil Well			8. WELL NAME and NUMBER: UTE TRIBAL 13-9-4-3-2WH				
2. NAME OF OPERATOR: NEWFIELD PRODUCTION CO	OMPANY		9. API NUMBER: 43013520790000				
3. ADDRESS OF OPERATOR: Rt 3 Box 3630 , Myton, UT		PHONE NUMBER: Ext	9. FIELD and POOL or WILDCAT: NORTH MYTON BENCH				
4. LOCATION OF WELL FOOTAGES AT SURFACE: 0276 FNL 1452 FWL			COUNTY: DUCHESNE				
QTR/QTR, SECTION, TOWNS	HIP, RANGE, MERIDIAN: 16 Township: 03.0S Range: 02.0W Meric	lian: U	STATE: UTAH				
11. CHEC	K APPROPRIATE BOXES TO INDICATE	NATURE OF NOTICE, REPOR	RT, OR OTHER DATA				
TYPE OF SUBMISSION		TYPE OF ACTION					
	ACIDIZE [	ALTER CASING	CASING REPAIR				
☐ NOTICE OF INTENT	CHANGE TO PREVIOUS PLANS	CHANGE TUBING	CHANGE WELL NAME				
Approximate date work will start:	CHANGE WELL STATUS	COMMINGLE PRODUCING FORMATIONS	CONVERT WELL TYPE				
✓ SUBSEQUENT REPORT	l ,	_					
Date of Work Completion: 7/29/2014	L DEEPEN	FRACTURE TREAT	☐ NEW CONSTRUCTION				
.,_,,_,.	OPERATOR CHANGE	PLUG AND ABANDON	L PLUG BACK				
SPUD REPORT Date of Spud:	PRODUCTION START OR RESUME	RECLAMATION OF WELL SITE	RECOMPLETE DIFFERENT FORMATION				
	REPERFORATE CURRENT FORMATION	SIDETRACK TO REPAIR WELL	TEMPORARY ABANDON				
	TUBING REPAIR	VENT OR FLARE	WATER DISPOSAL				
DRILLING REPORT Report Date:	WATER SHUTOFF	SI TA STATUS EXTENSION	APD EXTENSION				
	WILDCAT WELL DETERMINATION	OTHER	OTHER: Daily Drilling Reports				
12 DESCRIBE PROPOSED OR	COMPLETED OPERATIONS. Clearly show al	I nertinent details including dates	·				
I .	sation with Dustin Doucet, at						
	Reports for the above ment		Accepted by the Utah Division of				
	,		Oil, Gas and Mining				
			FOR RECORD ONLY				
			January 22, 2016				
NAME (PLEASE PRINT)  Mandie Crozier	<b>PHONE NUMBE</b> 435 646-4825	R TITLE Regulatory Tech					
SIGNATURE	433 040-4023	DATE					
N/A		1/21/2016					

RECEIVED: Jan. 21, 2016

## NEWFIELD

#### **Summary Rig Activity**

Job Category	Job Start Date	Job End Date
		•

Daily Operation				
Report Start Date	Report End Date	24hr Activity Summary		
4/13/2014	4/14/2014	Set 60' of 20" conductor pipe.		10
Start Time	00:00	End Time	00:00	Comment Pete Martin Rig #16 spudded 26" hole on 04/13/2014 and drilled to 60' GL. Set 20", 52.78# (0.250" wall), SA53B conductor pipe at 60' GL and cemented to surface with Redi Mix.
				Kylan Cook notified UDOGM and BLM by e-mail @ 23:00 PM on 04/11/2014 to spud conductor hole on 04/13/2014.
Report Start Date 4/16/2014	Report End Date 4/17/2014		picking up directional	BHA. Trip in hole to 60' GL. Prime mud pumps.
Start Time	00:00	End Time	21:30	Comment MIRU Pro Petro Rig #10.
Start Time	21:30	End Time	23:30	Comment Start picking up directional BHA. Trip in hole to 60' GL.
Start Time	23:30	End Time	00:00	Comment Prime mud pumps. Fix leaks in flow line.
Report Start Date 4/17/2014	Report End Date 4/18/2014	24hr Activity Summary Prime mud pumps. Fix leaks in	n flow line. Spud 17 1/2	2" hole @ 01:00 AM. Drill from 60' GL to 650' GL. Replace packing in top drive. Drill from 650' GL to 1160' GL.
		Surface hole surveys are grou	nd level.	
Start Time	00:00	End Time	01:00	Comment Prime mud pumps. Fix leaks in flow line.
Start Time 01:00	01:00	End Time	09:00	Comment Spud 17 1/2" hole @ 01:00 AM on 04/17/2014. Drill from 60' GL to 470' GL while picking up directional tools.
				First sign of water flow was while making connection at 390' GL. Flowing about 6.5 gallons per minute. Water sample was collected.
Start Time	09:00	End Time	09:30	Comment Change rubber size in rotating head.
Start Time	09:30	End Time	11:00	Comment Drill from 470' GL to 650' GL.
Start Time	11:00	End Time	13:30	Comment Replace packing in top drive.
Start Time	13:30	End Time	14:00	Comment Drill from 650' GL to 710' GL.
				Slide: 650' to 680' - TFO=320M Slide: 680' to 710' - TFO=300M
Start Time	14:00	End Time	14:30	Comment Work on pit pump.
Start Time	14:30	End Time	15:00	Comment Drill from 710' GL to 740' GL.
Start Time	15:00	End Time	15:30	Comment Work on pit pump. Replace circuit breaker on electric motor.

### NEWFIELD

#### **Summary Rig Activity**

Start Time	End Time	Comment
15:30	20:30	Drill from 740' GL to 1040' GL.
		Slide: 740' to 760' - TFO=320M
		Slide: 770' to 860' - TFO=320M
		Slide: 890' to 950' - TFO=320M
Start Time	End Time	Comment
20:30	21:00	Change swab in mud pump.
Start Time	End Time	Comment
21:00	23:30	Drill from 1040' GL to 1160' GL.
Start Time 23:30	00:00	Comment Change swab in mud pump.
4/18/2014 4/19/2014 Drill fro GL. Ch	vity Summary Dm 1160' GL to 1220' GL. Mud pump repair. Dr Dmange swab. Drill from 1460' GL to 1550' GL.  e hole surveys are ground level.	rill from 1220' GL to1340' GL. Mud pump repair. Drill from 1340' GL to 1370' GL. Change swab. Drill from 1370' GL to 1460'
Start Time	End Time	Comment
00:00	01:30	Drill from 1160' GL to 1220' GL.
Start Time	End Time	Comment
01:30	02:30	Tighten pod bolts on mud pump.
Start Time 02:30	End Time 05:30	Comment Drill from 1220' GL to 1340' GL.
		Slide: 1315' to 1340' - TFO=90M
Start Time 05:30	End Time 14:30	Comment Go through centrifugal charge pump. Found gravel in pump. Change swabs.
Start Time 14:30	End Time 15:30	Comment Drill from 1340' GL to 1370' GL.
		Slide: 1340' to 1370' - TFO=90M
Start Time	End Time	Comment
15:30	16:30	Change swab in mud pump.
Start Time	End Time	Comment
16:30	20:00	Drill from 1370' GL to 1460' GL.
Start Time 20:00	End Time 21:30	Comment Change swab in mud pump. Work on rod washers.
Start Time	End Time	Comment
21:30	00:00	Drill from 1460' GL to 1550' GL.
4/19/2014 4/20/2014 Drill fro	ate. Replace oil cooler on rig.	ner. Drill from 1625' GL to TD @ 1635' GL. Circulate. Start wiper trip. Replace hydraulic hoses on rig. Finish wiper trip.
Start Time 00:00	End Time 02:30	Comment Drill from 1550' GL to 1625' GL.
Start Time	End Time	Comment
02:30	03:00	Change swab and liner in mud pump.
Start Time	End Time	Comment
03:00	03:30	Drill from 1625' GL to TD @ 1635' GL. TD 17 1/2" hole @ 03:30 AM on 04/19/2014.
Start Time 03:30	End Time 04:30	Comment Circulate for wiper trip.

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#### **Summary Rig Activity**

Well Name: Ute Tribal 13-9-4-3-2WH

Start Time		End Time		Comment
Start Time	04:30	End Time	05:00	Start wiper trip out to 1550' GL.
Start Time	04.00	End Time	00.00	Comment
	05:00		12:30	Replace hydraulic hoses on rig.
Start Time		End Time		Comment
	12:30		18:00	Make wiper trip out to drill collars. Had to wash and ream 540' off bottom. No tight hole while tripping back to bottom. Tag 150' of fill tripping back to bottom.
Start Time	18:00	End Time	19:30	Comment Circulate to trip out of hole and run surface casing.
Start Time	19:30	End Time	00:00	Comment Lost hydraulic oil cooler on rig. Replace oil cooler.
Report Start Date	Report End Date	24hr Activity Summary	00.00	Lost riyuraulic oli cooler oli rig. Nepiace oli cooler.
4/20/2014	4/21/2014		ip out of hole from 1635	to 1370'. Replace hydraulic hoses. Finish tripping out of hole. Run surface casing. Cement surface casing. Wait on cement.
Start Time		End Time	•	Comment
	00:00		01:30	Finish replacing oil cooler on rig.
Start Time	01:30	End Time	02:30	Comment Trip out of hole from 1635' GL to 1370' GL. Tight hole while tripping.
Start Time		End Time		Comment
	02:30		07:00	Replace hydraulic hoses on rig.
Start Time	07:00	End Time	10:30	Comment Finish tripping out of hole to run surface casing. Lay down directional BHA. Had to wash and ream first 330' off bottom.
Start Time		End Time		Comment
	10:30		11:30	Rig up to run surface casing.
				First sign of water flow was while making connection at 390' GL. Well was not flowing at the start of running casing.
Start Time	11:30	End Time	17:30	Comment Run 38 joints (1612.99') of 13 3/8", 54.5#, J-55, BT&C casing with Top-Co guide shoe and float collar. 14 centralizers spaced 10' from the shoe, on top of joints #2 & #3 then every 3rd collar to surface. Landed @ 1612.99' GL, Float Collar @ 1568.89' GL. Had to wash last 3 joints of casing down.
Start Time	17:30	End Time	18:30	Comment Circulate with casing on bottom.
Start Time	17.50	End Time	10.50	Comment Comment
Clair Fillio	18:30	Ziid iiiilo	20:00	Weld top cap from casing to conductor pipe.
Start Time	20:00	End Time	20:30	Comment Circulate casing with rig pump. Rig up Pro Petro Cementers.
Start Time	20:30	End Time	22:30	Comment Cement Job: Pumped 10 bbls fresh water & 40 bbls gelled water flush ahead of cement.
				Lead: Mixed and pumped 550 sacks (280 bbls) of Type V Cement with 16% Gel, 10 #/sk Gilsonite, 2#/sk Gr3, 3% Salt, and 1/4 #/sk Flocele. Mixed cement @ 12.0 ppg with yield of 2.86 cf/sk.
				Tail: Mixed and pumped 675 sacks (138 bbls) of Premium Class G Cement with 2% CaCl2, and 1/4 #/sk Flocele. Mixed cement @ 15.8 ppg with yield of 1.15 cf/sk.
				Displaced cement with 243 bbls fresh water. Bumped plug with 720# @ 22:25 PM on 04/20/2014. Floats held. 80 bbls cement to surface. Shut in well after pumping stopped.
				Kylan Cook notified UDOGM and BLM of the surface casing & cement job via e-mail on 04/17/2014 @ 18:30 PM.

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#### **Summary Rig Activity**

tart Time	22:30	End Time	00:00	Comment Wait on cement. Prepare to move rig over (Pad Well) to Ute Tribal 14-9-4-3-2WH.
eport Start Date	Report End Date	24hr Activity Summary	00.00	wait on cement. Frepare to move hig over (Fau Weil) to ote Tribar 14-3-4-3-2WH.
4/21/2014	4/22/2014	Wait on cement. Prepare to move rig	over (Pad Well)	to Ute Tribal 14-9-4-3-2WH. Release rig @ 06:30 AM on 04/21/2014.
art Time	00.00	End Time	20.20	Comment West on compart Property to make a rice over /Ped Well) to Like Tribel 44.0.4.2.2WILL
	00:00		06:30	Wait on cement. Prepare to move rig over (Pad Well) to Ute Tribal 14-9-4-3-2WH.
				Release rig @ 06:30 AM on 04/21/2014.
eport Start Date 5/2/2014	Report End Date 5/3/2014	24hr Activity Summary Finish preparation of location for drilli	na ria	
art Time	3/3/2014	I mish preparation of location for drining	ilg ilg.	Comment
	00:00		00:00	04/26/2014 - Drill Mouse Hole.
				04/29/2014 - Final blade location.
				05/01/2014 - Weld on Wellhead.
				05/02/2014 - Cement cellar floor up to the top of base plate on wellhead.
				SURFACE HOLE DIRECTIONAL SURVEY DEPTHS ARE GROUND LEVEL.
				Location is ready for drilling rig.
eport Start Date	Report End Date	24hr Activity Summary		Escation to roady for driving rig.
5/19/2014	5/20/2014		Down, Scope De	errick down, prep rig for AM Move to new location.
tart Time	40.00	End Time		Comment
eport Start Date	18:00 Report End Date	24hr Activity Summary	00:00	Rig Down Prep Derrick for Scopping Down, Scope Derrick down, prep rig for AM Move to new location.
5/20/2014	5/21/2014		_Av over Derrick	, MI Eq. to new location, set in place, Scope down Sub, Lower Derrick, Remove "A" Legs & Pulled Center Steal.
tart Time		End Time		Comment
	00:00		06:00	RD water lines, power down rig, rig down power cords to HPU and festoon, take off sub wind walls, prepare to la down sub and derrick.
art Time	00.00	End Time	20.00	Comment
art Time	06:00	End Time	06:30	PJSM for rig move.
	06:30		00:00	Squat sub, lower derrick, roll up all lines on derrick, prepare for cranes to move. Move in Equipment & Spot in place. Held Safety Mtg. w/ JD, Pioneer & NFX, LD Derrick from Floor, & Tear down, Haul to new location, RU Mats, Set Gens, /Water tank & RU Pits. Run lines/Elec. Had trouble remoing center steel pins worked for 4 hrs to remove. SD  Total loads hauled 12 loads, Equipment to Location: 1 pole trucks, 1 bed trucks, 3 haul truck, 2 forklifts 2 Cranes 2 Pushers, 0 Pilots, Poineer had 2 crews on days, 1 Crew on nights.Held.
eport Start Date 5/21/2014	Report End Date 5/22/2014			then rig up. Mast is assembled and ready to pin on sub, Stop trucks and cranes at 21:00 for dark. Continued working on
art Time		back yard rig up and inspection, welc	ers working on t	flow line and Shaker slides, Rig crew clean and prepare derrick.
ait iiiiie	00:00	L 1 1	06:00	Clean derrick, organize location, change ropes in board, pick up trash, boards.
art Time	06:00	End Time	06:30	Comment PJSM w\JD Field services, JC crane, pioneer rig crews and pushers and Newfield company rep.
art Time		End Time	<del>-</del>	Comment
	06:30	1	14:30	Continue breaking down sub. Load out derrick, subs, center steel, mats and change house and move to new locations. Continue rigging up mats, electric, subs and center steel and ST-80. Welder working on flow line and setting Peak equipment. Rigged up sub and hydraulics, Fired generators and powered sub structure.

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#### **Summary Rig Activity**

Start Time	14:30	End Time	18:00	Comment (STOP) -Truck Hauling Derrick to new location got off center of location road into soft fill and began to sink on passenger side and derrick was in danger of tipping over. Stopped job Gin pole truck leaving location to support derrick but the driver did not lower his Gin Poles enough to safely drive under the overhead powerlines and the lower static cable on the powerline was pulled loose from power poles when the top of the ginpulls struck it. Job was stopped again and downed power line was treated as a live wire until it could safely be determined to be non-energized. Tied gin truck on to derrick to prevent derrick from tipping until a crane could be moved over and rigged up to lift and level derrick. Held safety stand down with all personell.
Start Time	18:00	End Time	21:00	Comment (START) Bring derrick onto Location and hald a critical lift Safety meeting and JSA with trucks, cranes and rig crew. Lift derrick and Spool off of trailer and Install A-Leg section on derrick. Stopped trucks and cranes at 21:00
Start Time	21:00	End Time	00:00	Comment Rig up Pumps and Mud tanks as well as all electrical and circulating systems in back yard. Perform Prespud inspection of pump and tank area as well as generator and VFD area. Haul in 20% KCL brine and Fresh water, fill Pits and Premix with fresh water. Crews working on rigging up hydralics and cleaning Derrick and making mast ready to set on floor and stand derrick.
Report Start Date 5/22/2014	Report End Date 5/23/2014	24hr Activity Summary Clean and prepare derrick and up and preparing for Nipple-up		afety meeting and set derrick on floor and rig up, released trucks at 12:00 and released last crane at 1600, continue rigging
Start Time	00:00	End Time	06:00	Comment Continue to Rig up Pits and Pumps, Fill pits with 500 BBIs fresh water then fill premix with 300 BBIs, Iowa Tank Lines and 4C reclamation hauling water in. Wash derrick and prepare for raising mast. Begin Bleeding Hydraulic system on derrick at 03:00. Perform pre spud inspection on Generators and VFD house, pre spud inspect Pits and Pumps.
Start Time	06:00	End Time	06:30	Comment PJSM, Moving the rig. With rig crews, JC crane, Newfield company rep, JD field services.
Start Time	06:30	End Time	16:00	Comment Install derrick, top dog house, lift sub, install derrick board, Raise mast, install handrails and floor plates, scope up sub, rig up all floor power, air and hydralic, set in catwalk and front stompers, set in accumulator parts house, set stairs sub braces, wind walls and continue rigging up back yard, electric lines and water lines. Prepare derrick, install bop's under sub base. Installed flow line and buster lines with crane, Prepare to scope mast.  Release first crane at 10:00, release JD field services trucks at 12:00, one crane on location hanging wind walls and misc equipment released at 16:00.
Start Time		End Time		Comment
	16:00		00:00	(Start) Rig up- (last crane released at 16:00) - Hold Pre Job safety Meeting with rig crew, scope out mast and rig up rig floor and Top Drive. Hook upService loop and stand BOP up under sub with Wrangler. Rig up Rig floor and scaffolding around BOP, Begin changing RBOP and Saver sub on TDS, rig up service loop and Stand pipe. Perform Pre spud inspection on complete rig Welders Working on scaffolding under sub and making up 6" bypass line for cement to return to Solids 3 sided bin (Near miss related hazard mitigation)
Report Start Date 5/23/2014	Report End Date 5/24/2014	80 and Test BOP. Pick up and BOP Tested to 5m Specificatio	scribe directional tools	
Start Time	00:00	End Time	06:00	Comment Continue rig up rig floor, Make up Saver sup and R-Bop Valve install service loop and standpipe, Install lock rings

# NEWFIELD

### **Summary Rig Activity**

Start Time	End Time		Comment
06:00		10:30	(Start) NU BOPE - Begin nipple up with B&C Quicktest, Make uyp flowline and install kill line and hydraulic controle lines. Instal ckoke line and make up all connections Per API spec.
Start Time 10:30		11:30	Comment (STOP) Rig repair - Hold JSA and Safety Meeting with J&C crane, Rig up Crane and swing ST-80 off rig floor, Swing new ST-80 onto floor, Rig down crane, Hook up ST-80 and test run, (functioning normal)
Start Time 11:30	End Time	18:00	Comment (START) - Test BOP/ CSG, Pressure test BOPE with B&C Quick test Test 1: Upper pipe rams, Hydraulic IBOP, Choke line check Valve, Inside manual Choke line valve At 250 PSI low and 5000 PSI high (Kill line Check valve failed) Closed Inside Kill line gate valve to complete test. Test 2: Upper Pipe rams, Manuel IBOP, Outside Kill Valve and HCR at 250 low and 5000 PSI high Test 3 Dart Valve to 250 PSI low and 500 PSI high Test 4: Lower Pipe Rams, TIW Valve Outside Kill Line Valve, Choke line, Inside choke manifold and Panic line valves and Gauge loop Valve to 250 Low and 5000 PSI high Test 5: Lower Pipe Rams, Outside Kill Line valve, Choke line, Outside Choke manifold Valves and outside panic line valve to 250 low and 5000 PSI high Test 6: Pull Drill pipe and test Blind rams,
			Derrick Man Changing Swab's and Liners in Mud Pumps to 6"
Start Time 18:00	End Time	19:00	Comment (STOP) Repair Rig - BOP change out Choke line Check valve
Start Time 19:00		21:00	Comment (Start) Test BOP / Casing, Test Blind rams and Choke line check valve to 250 PSI low and 5000 PSI high, Run test Joint and sting into Plug Test Hydril to 250 Low and 3500 PSI high Test Super choke and Manuel choke to 500 PSI, Pull Test Plug and Fill BOP with fresh water Close Blind rams and test casing to 250 low and 1500 PSI high for 30 Minutes. Perform accumulator function test.
Start Time 21:00	End Time	22:00	Comment (START) Handle BHA / Pick up drill String - Install wear Bushing in well head and tighten 4 Locking pins.
Start Time 22:00	End Time	00:00	Comment Handle BHA / Pick up directional tools, (JSA and PJSM on working with High torque and rig tongs) Torque bit to 70 K with, torque 7 5/8" API reg. crossover on bottom of motor to 83K. Orient tools.
	2014 Pick up BHA and drill pipe and repair issues with VF		at 1565 and Drill out to 1675', Hold BOP drill then perform FIT to 12 PPG EMW. Drill from 1675 to 2200' Trouble Shoot airs then continue drilling from 2200 to 3312'
Start Time 00:00	End Time	04:30	Comment Pick up HWDP and Drilling Jars to 1060' then Pick up Drill pipe and trip in hole to tag cement at 1565'
Start Time 04:30	End Time	05:30	Comment (START) Drill cement from 1565 to float collar at 1593'
Start Time 05:30	End Time	06:00	Comment Lubricate rig - Service TDS System
Start Time 06:00	End Time	08:00	Comment Continue Drilling Cement and shoe Track then Drill 10' of hew hole to 1675' Circulate hole clean( Verify MW @ 8.5 ppg), spot Viscus pill across open hole Hold Safety Meeting with rig crew and B&C Quicktest then perform BOP drill closeing Hydrill and open HCR valve.
			Pump in with B&C Quictest truck at 11 GPM Monitoring steady pressure increase to 300 PSI, Stop Pumping with 55 Gallons pumped in and hold for 5 Minutes, pressure bleed-off to 293 PSI, Bleed off and rig down B&C set Choke Manifold valves for soft shut in against Supper Choke.

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### **Summary Rig Activity**

Start Time		End Time	Comment
Start Time	08:00	08:30	(START) Drilled from 1675' to 1726 with 100% rotation with Flow rate at 585 Gpm with 1750 PSI
	08:30	End Time 09:00	Lubricate Rig - Service Top Drive, ST-80, Blocks, Crown, Catwalk.
Start Time	09:00	End Time 14:00	Comment Drilled 435' of 12 1/4" hole from 1726 to 2161 with 908 Gpm with 3120 Psi on bottom with 450 diff. Avg ROP: 87 ft/ hr Slide from 2105' to 2134', 29' @ 320 MTF in 1 hr. Total Rotate: 406' in 4 hr. MW 8.6 Putting ez-mud down Drill pipe on connections. Started running 2 centrifuges at 2100' Re-dress Shakers with API 175 screens to keep Shakers from running over Trouble shoot VFD and drillers console for coding Issue.
tart Time	14:00	End Time 14:30	Comment (STOP) Rig Repair - Replace 2" Bleed off valve on #2 Mud pump. Trouble shoot VFD and drillers station with Pioneer Electrician Mac Jones to correct Coding issue that is Killing power to Top Drive and Mud pumps while drilling
start Time	14:30	End Time 15:00	Comment (START) Drilled 38' of 12 1/4" hole from 2161 to 2199' 100% Rotary  Rotate: 38' in .5 hours
tart Time		End Time	Comment
tart Time	15:00	15:30	(Stop) Rig Repair - Top drive, REinstall Dies in Grabber on TDS
	15:30	18:30	(START) Drill 333' of 12 1/4" Hole from 2199' to 2532' at with 908 GPM with 3300 PSI with 450 Diff at 35 to 40 k Wob.  MW: 8.6 ppg Slides: from 2390 to 2420 - 30' @ 270 MTF in .5 hr, Rotate: 303' in 2.5 Hr Adding EZ- Mud down Drill pipe on connections / Peak running strip mode.
art Time	18:30	End Time 19:00	Comment (Stop) Rig Reopair Pumps- Change liner gasket on #1 Mud Pump.
Start Time	19:00	End Time 00:00	Comment (START) Drill 780' of 12 1/4" Hole from 2532' to 3312' at with 908 GPM with 3400 PSI with 450 Diff at 35 to 40 k Wob.  MW: 8.8 ppg Rotate: 780' in 5 Hr Adding EZ- Mud down Drill pipe on connections / Peak running strip mode. Pumped 25 bbl high vis Sweep at 2700' to clean hole with good results (increased ROP less drag and pressure) Pumped 25 bbl sweep at 3200' (good results)
Report Start Date 5/25/2014		tivity Summary g 12 1/4" hole from 3312' to 5436' Cleaning	g rig.
Start Time	00:00	End Time 05:30	Comment Drilled 597' of 12 1/4" Hole from 3312' to 3909' at 87.3 FPH Avg. with 908 GPM with 3800 PSI with 450 Diff at 3 to 40 k Wob.  Adding EZ- Mud down Drill pipe on connections / Peak running strip mode.
Start Time	05:30	End Time 06:30	Comment Rig service (JSA & Personel lift permit) Lubricate and inspect TDS, st-80, Catwalk, and Draw works

# NEWFIELD

### **Summary Rig Activity**

Well Name: Ute Tribal 13-9-4-3-2WH

Start Time			
	06:30	End Time 00:00	Comment Drilled 1527' of 12 1/4" Hole from 3909' to 5436' at 87.3 FPH Avg. with 908 GPM with 3800 PSI with 450 Diff at 35 to 40 k Wob.  Reduced Flow rate at 4800' to 870 GPM to keep Max pump pressure below 3800 psi Slides: f/4116' - 4156 (40' in .75 Hr) @ 300 MTF f/4475 - 4525 (50' in .75 hr) @ 270 MTF f/4761 - 4811 (50' in 1.25 hr.) @ 300 MTF f/5138 - 5183 (45' ln 1 hr) @ 310 MTF f/5232 - 5262 (30' in 1 hr) @ 320 MTF f/5244 - 5436 (14' in 1 hr) @ 320 MTF Total Slides:189' in 5 hr  Rotate: 1338' in 12.5 Hr  MW holding at 9.0 ppg  Adding EZ- Mud down Drill pipe on connections / Peak running strip mode. / Changed 6 screens on 3 shakers to 200 Mesh  Pumped 25 bbl high vis Sweep at 4200', 4700', 5200' to clean hole with good results (increased ROP less drag and pressure)  Changed shaker screens on #2 Shaker to 200 API  Changed RPM on 5500 Cent and 718 Cent to 1500 RPM at 15:30 to strip more Clays and try to drop weight of mud.
eport Start Date 5/26/2014	5/27/2014 Drilling	ivity Summary g 12 1/4" hole from 5436' to 5642', Troble sh out) Pick up new bit and motor, Trip in hole to	oot Bit and Motor, (Possible motor failure or RO Bit) pull out of hole, inspect and lay down Mud motor and Bit ( Motor OK/ Bit 5510 ' Wash to bottom and drill from 5642' to 5710'
tart Time	00:00	End Time 04:00	Comment Drilled 134' of 12 1/4" Hole from 5436' to 5570' at 33.5 FPH Avg. with 870 GPM with 3800 PSI with 450 Diff at 35 to 40 k Wob.
			Slides: f/5436' - 5458 (22' in .5 Hr) @ 320 MTF f/5517' - 5560' (43' in 1.5 hr) @ 320 MTF  Total Slides:65' in 2 hr Rotate: 69' in 2 Hr MW holding at 9.0 ppg Adding EZ- Mud down Drill pipe on connections / Peak running strip mode @ 1500 RPM.
	04:00	End Time 04:30	f/5517' - 5560' (43' in 1.5 hr) @ 320 MTF  Total Slides:65' in 2 hr Rotate: 69' in 2 Hr MW holding at 9.0 ppg Adding EZ- Mud down Drill pipe on connections / Peak running strip mode @ 1500 RPM.  Comment (STOP) Unplanned - Work tight hole. Drilled Trona Marker at 5570' Stuck pipe, Stopped pumps and jarde up wit 50 K overpull, Sting came free, Break circulation with 870 GPM and wash and ream from 5550' to 5570' with 45 rpm to clean up tight spot.
art Time	04:00 04:30	04:30 End Time 05:00	f/5517' - 5560' (43' in 1.5 hr) @ 320 MTF  Total Slides:65' in 2 hr Rotate: 69' in 2 Hr MW holding at 9.0 ppg Adding EZ- Mud down Drill pipe on connections / Peak running strip mode @ 1500 RPM.  Comment (STOP) Unplanned - Work tight hole. Drilled Trona Marker at 5570' Stuck pipe, Stopped pumps and jarde up wit 50 K overpull, Sting came free, Break circulation with 870 GPM and wash and ream from 5550' to 5570' with 45 rpm to clean up tight spot.  Comment (Start) Drilled 42' of 12 1/4" hole from 5570 to 5612 at 84 fph avg. with 870 gpm and 450 diff. MW @ 9 ppg
art Time art Time art Time		04:30	f/5517' - 5560' (43' in 1.5 hr) @ 320 MTF  Total Slides:65' in 2 hr Rotate: 69' in 2 Hr MW holding at 9.0 ppg Adding EZ- Mud down Drill pipe on connections / Peak running strip mode @ 1500 RPM.  Comment (STOP) Unplanned - Work tight hole. Drilled Trona Marker at 5570' Stuck pipe, Stopped pumps and jarde up witl 50 K overpull, Sting came free, Break circulation with 870 GPM and wash and ream from 5550' to 5570' with 45 rpm to clean up tight spot.  Comment (Start) Drilled 42' of 12 1/4" hole from 5570 to 5612 at 84 fph avg. with 870 gpm and 450 diff. MW @ 9 ppg  Comment Rig service - (JSA & Personnel lift permit) Lubricate draw works TDS and ST-80 Tear-down and visually inspect #1 Mud pump fluid end (No repairs needed)
art Time	04:30	04:30  End Time  05:00	f/5517' - 5560' (43' in 1.5 hr) @ 320 MTF  Total Slides:65' in 2 hr Rotate: 69' in 2 Hr MW holding at 9.0 ppg Adding EZ- Mud down Drill pipe on connections / Peak running strip mode @ 1500 RPM.  Comment (STOP) Unplanned - Work tight hole. Drilled Trona Marker at 5570' Stuck pipe, Stopped pumps and jarde up wit 50 K overpull, Sting came free, Break circulation with 870 GPM and wash and ream from 5550' to 5570' with 45 rpm to clean up tight spot.  Comment (Start) Drilled 42' of 12 1/4" hole from 5570 to 5612 at 84 fph avg. with 870 gpm and 450 diff. MW @ 9 ppg  Comment Rig service - (JSA & Personnel lift permit) Lubricate draw works TDS and ST-80

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### **Summary Rig Activity**

	End Time		Comment
07:30		09:00	Continue circulating, fill trip tank and Build slug, while circulating to condition Mud.
09:00	End Time	15:00	Comment Pull out of hole to inspect / change Bit and Mud Motor Pull tight at 5570' (250K) Drain and Inspect Mud Motor then break-out and Inspect Bit (Mud Motor: OK / Bit: Ring out - Nose, DBR but IN GAUGE).
			While Pulling Pipe, Tear-down and Inspect Fluid end of #2 Mud Pump (No Repairs Needed)
15:00		15:30	Comment Rig service - (JSA & Personnel lift permit) Lubricate draw works TDS and ST-80 Function test Blind rams.
15:30		16:30	Comment Pick up New Blt (DP506FX) and Mud Motor (Weatherford Hyperline 7840, 7/8 lobe, 2.12 deg) Install New batteries in EM tool and Scribe Directional tools.
16:30	End Time	22:30	Comment Trip in hole from 120' to 5510'. Bridged out at 1845' Pick up rotatre string to orient tool face and work down through tight spot. Fill pipe at 2000 and empty trip tank. Trip in hole to 3996 Fill pipe, break circulation and empty trip tank. Break Circulation @ 5510 then wash to bottom Reaming through the Trona at 5570 several times. TRIP GAS: 3950 u
22:30	End Time	00:00	Comment (Start) Drilled 68' of 12 1/4" hole from 5642 to 5710' at 45 fph avg. with 870 gpm and 450 diff. MW @ 9.2 ppg Continuing Mud up
Report End Date 5/28/2014	Drilling 12 1/4" from 5710 to 6	6849.	
00:00	End Time	05:30	Comment Drilled 273' of 12 1/4" hole from 5710' to 5983' at 49.6 fph avg. with 780 gpm and 400 diff. Slides: f/5892 - 5932 (40' in 1.5 Hr) @ 330 MTF MW @ 9.3 ppg.
05:30	End Time	06:00	Comment Rig Service - (JSA & Personnel lift Permit) Lubricate and inspect Draw works, blocks, TDS, ST-80, Catwalk an Pumps
06:00	End Time	17:30	Comment Drilled 567' of 12 1/4" hole from 5983' to 6550' at 49.3 fph avg. with 780 gpm and 400 diff. Slide F/6455 - 6490 (33' in 1.5) @ 50 R GTF Total rotate: 534' in 10 hr MW @ 9.3 ppg.
17:30	End Time	18:00	Comment Rig Service - (JSA & Personnel lift Permit) Lubricate and inspect Draw works, blocks, TDS, ST-80, Catwalk ar Pumps
18:00	End Time	00:00	Comment Drilled 299' of 12 1/4" hole from 6550' to 6849' at 49.8 fph avg. with 780 gpm and 400 diff. Slides: f/6551 to 6581 (30' in 1 HR) @ 80 R GTF f/6840 to 6849 (9' in .5) @ 80 R GTF Total rotate: 260' in 4.5 hr
	15:00  15:30  16:30  22:30  Report End Date 5/28/2014  00:00  05:30  06:00  17:30	07:30  09:00  End Time  15:00  15:30  End Time  16:30  End Time  22:30  End Time  24hr Activity Summary 5/28/2014  Drilling 12 1/4" from 5710 to 6  End Time  05:30  End Time  End Time  17:30  End Time  End Time	07:30         09:00           09:00         End Time           15:00         15:30           15:30         End Time           16:30         End Time           22:30         End Time           22:30         O0:00           Report End Date 5/28/2014         24hr Activity Summary Drilling 12 1/4" from 5710 to 6849.           00:00         End Time           05:30         O6:00           06:00         End Time           17:30         End Time           17:30         End Time

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#### **Summary Rig Activity**

art Time		End Time	Comment
	00:00	03:30	Drilled 176' of 12 1/4" hole from 6849' to 7025' at 50.3 fph avg. with 780 gpm and 400 diff. Slides: f/6849 to 6873 (24' in 1 hr.) @ 85R GTF Total rotate: 152' in 2.5 hr MW @ 9.3 ppg.
art Time	03:30	End Time 04:00	Comment Rig Service - (JSA & Personnel lift Permit) Lubricate and inspect Draw works, blocks, TDS, ST-80, Catwalk and Pumps
art Time	04:00	End Time 14:30	Comment Drilled 357' of 12 1/4" hole from 7025' to 7382' at 50.3 fph avg. with 780 gpm and 400 diff. Slides: f/7027 to 7068 (41' in 2.5 hr.) @ 25R GTF 7309' to 7344' (35' in 1 hr) @ 310 M Total rotate: 281' in 7 hr MW @ 9.3 ppg Change Shaker screens on #3 Shaker to API 230 #2 200 api and 170 API on #1
art Time	14:30	End Time 15:00	Comment Rig Service - (JSA & Personnel lift Permit) Lubricate and inspect Draw works, blocks, TDS, ST-80, Catwalk and Pumps Clean Radiators on all 3 Generators due to High temp.
art Time	15:00	End Time 00:00	Comment Drilled 318' of 12 1/4" hole from 7382' to 7700 at 35.3 fph Avg. with 780 gpm and 400 diff. Slides: f/7404 to 7454 (50' in 2 hr.) @ 290 MTF 7598' to 7639' (41' in 2.5 hr) @ 40R GTF Total rotate: 227' in 4.5 hr MW @ 9.5 ppg
port Start Date 5/29/2014		tivity Summary g 12 1/4" from 7700 to 8073.	
art Time	00:00	End Time 03:30	Comment Drilled 84' of 12 1/4" hole from 7700 to 7784 at 24 fph Avg. with 780 gpm and 400 diff. Slides: f/7700 to 7740 (40' in 2.5 hr.) @ 25 R GTF
			Total rotate: 44' in 1hr MW @ 9.5 ppg
art Time	03:30	End Time 04:00	Comment Rig Service - (JSA & Personnel lift Permit) Lubricate and inspect Draw works, blocks, TDS, ST-80, Catwalk and Pumps
rt Time	04:00	End Time 17:00	Comment Drilled 190' of 12 1/4" hole from 7784 to 7974at 14.3 fph Avg. with 780 gpm and 400 diff. 100% Slides MW @ 9.5 ppg
rt Time	17:00	End Time 17:30	Comment Rig Service - (JSA, LOTO, and Personnel lift permit) Lubricate and inspect draw works, blocks, ST-80, Catwark crown, inner BOP. Shut down generators to clean out radiators.

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### **Summary Rig Activity**

ime		End Time	Comment
	17:30	00:00	Drilled 99' of 12 1/4" hole from 7974' to 8073, at 15.2 fph Avg w/ 750 GPM at 250 Diff. Slides: 7984' to 8020' (36' in 2.5 hr) @ 45R Slides: 8038' to 8068' (30' in 2.5 hr) @ 45R Slides: 8068' to 8073' (5' in .5 hr) @ 60R GTF Rotate: 18' in .5 hrs MW @ 9.4 Vented to gas buster 1-3' flair w/ .1 gas cut w/ 4200 units of back ground gas
t Start Date 5/30/2014		ctivity Summary ng 12 1/4" from 8073 to 8218. Tripped out for	
ime	00:00	End Time 06:00	Comment Drilled 91' of 12 1/4" hole from 8073, to 8164 at 15.1 fph Avg w/ 750 GPM at 250 Diff. Slides: 8073' to 8133' (60' in 4 hr) @ 60R GTF 8133' to 8164' (31' in 2 hr) @ 85R GTF MW @ 9.4 Vented to gas buster 1-3' flair w/ .1 gas cut w/ 4200 units of back ground gas
ime	06:00	End Time 06:30	Comment Rig Service - (JSA, LOTO, and Personnel lift permit) Lubricate and inspect draw works, blocks, ST-80, Catwa crown, inner BOP. Shut down generators to clean out radiators.
Гime	06:30	End Time 09:00	Comment Drilling from 8164 to 8218' 54' Pressure spiked ROP slowed, Trouble shoot mud motor. continue drilling with reduced Flow rate to drill to survey point and Begin weighthing mud for trip.  MW raised to 9.6 PPG.
Time	09:00	End Time 14:00	Comment (Start) Circulate and reciprocate pipe from 8214' to 8156', Pumping @ 628 GPM, Rotating at 40 RPM, Increase MW from 9.5 to 10.0 ppg
Time	14:00	End Time 17:30	Comment (Stop) Pull out of hole from 8512 to 3597'
Time	17:30	End Time 18:30	Comment Rig Service - (JSA, LOTO, and Personnel lift permit) Lubricate and inspect draw works, blocks, ST-80, Catwa crown, inner BOP. Trouble shoot and fix bad plug on drawworks
Time	18:30	End Time 19:30	Comment Pull out of the hole from 3597' to 1070, got to HWDP and pulled rotating head.
Time	19:30	End Time 20:00	Comment Remove Rotating Head rubber
Time	20:00	End Time 20:30	Comment Lay down BHA
Time	20:30	End Time 23:00	Comment Picked up new bit and MM. Went in hole w/ a Smith MDi 716 bit and 2.12 degree 7/8, 4stage 0.16rev/gal slick Mud Motor. The rest of the BHA is the same as before.
Time	23:00	End Time 23:30	Comment Trip in the hole to 1070', stop and insert rotation head rubber
Time	23:30	End Time 00:00	Comment Install rotating head rubber

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#### **Summary Rig Activity**

Start Time	00:00	End Time	04:00	Comment Trip in hole from 1070 to 8060' while monitoring well on trip tank, Fill Pipe every 2000' Work tight spots at 1830', 3850', ans 5570'
Start Time	04:00	End Time	05:00	Comment Wash and ream last 158' from 8060 to 8218'
Start Time		End Time		4500U Trip gas  Comment
	05:00		14:30	(START) Drill 202' from 8218' to 8420 at 21.2 ft/ hr with 753 gpm at 3950 PSI at 350 diff. Slides: 8218 - 8259 (41' in 2.5 hr) @ 45R GTF, 8259'-8353' (94' in 4 hr) @ 45R, 8353' - 8403' (50' in 2.5 hr) @ 45R GTF, (Total : 185' in 9 HR) Rotate 17' in .5 hr TD interval @ 8420' at 14:30 MW: 10.1 ppg
Start Time	14:30	End Time	15:30	Comment (START) Circulate at Casing Point- Mix pill and Fill trip tank Check well for flow (NO FLOW) and Pump Slug.
Start Time	15:30	End Time	20:30	Comment (START)Pull out of hole for Casing run. Pull out from 8420 to 1100' then pull rotating head and continue to pull out of the hole to 92'
Start Time	20:30	End Time	22:00	Comment Lay down directional tools and equipment - Pull out and lay down NMDC then lay down and inspect EM tool, Beak down Tool Carrier, Double pin sub and Pull Motor and inspect bit(0-0-NO-A-X-I-NO-TD). Drain Motor, Break bit nd lay down Mud motor. Function test Blind Rams, clean floor and pick up single joint for Wear bushing removal.
Start Time	22:00	End Time	22:30	Comment Pull Wear Bushing
Start Time	22:30	End Time	23:00	Comment (START) Casing Operations- Pre Job safety Meeting & JSA w/ Kimzey Casing Service, rig crew, and drilling foreman. Discussed the rigging up and running process.
Start Time	23:00	End Time	00:00	Comment Begin rigging up Kimzey Casing Service
Report Start Date 6/1/2014	Report End Date 6/2/2014	24hr Activity Summary Rig up casing crew and run cas	ing	
Start Time	00:00	End Time	01:30	Comment Continue rigging up Kimzey casing - Picked up first Joint and Tried to use Rotary slips without success so rig up continued with installing Air slips.
Start Time	01:30	End Time	05:30	Comment Run 3 joints 9 5/8" N-80 BTC casing with Float shoe and float collar Pre Bucked and thread locked then rig up SRT tool and pump through float equipment from surface. Continue running casing from 135' to 2100' filling as needed for weight.
Start Time	05:30	End Time	06:00	Comment Fill casing and Service rig - Lubricate DW, St-80 and top drive, Service catwalk.
Start Time	06:00	End Time	20:30	Comment Run 9 5/8" N-80 BTC casing from 2100' to 8400' filling every 20 joints. Wash casing down from 8400' to 8420' with 10 BPM at 350 PSI Clean premix tank and fill with OBM from Storage and roll with aggitators and gun line Displacement OBM: 14.1 ppg, 118 sec/qt @ 78 deg. HES arrived at 12:00 begin to spot in and rig up
		l .		

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#### **Summary Rig Activity**

Well Name: Ute Tribal 13-9-4-3-2WH

t Time		End Time		Comment
	20:30		21:30	Circulate Casing while rigging down Klmzey casers and rig up Halliburton.
				Rig up cement head
t Time	04.00	End Time	00.00	Comment
t Time	21:30	I TO LITE WAS	22:00	(START) Cementing Operations - PJSM with Halliburton and rig crew
Time	22:00	End Time	00:00	Comment Cement Casing with HES -
	22.00		00.00	22:00 Rig up cement head and load plug (witnessed by Drilling foreman)
				22.00 Ng up coment nead and load plug (with eased by Dhilling Torentall)
				Job details:
				Tuned spacer: 40 bbl at11 ppg
				First lead :35 bbl at 12.5 ppg
				Second lead: 382 bbl at 12.5 with bwoc
				Tail: 134 bbls at 14 ppg
				Disp: 635 bbls of 14.1 ppg Oil mud
				22:28 Pump-in 3 bbls to prime pump and lines, close valve then pressure test to 3000 psi and hold 5 minutes
				then bleed off pressure
				Begin batch up tuned spacer and scale at 10.9 ppg
				22:36 Start down hole with Tuned Spacer at 2 Bpm with 53 psi
				22:38 Stage up to 4 Bpm 156 psi
				22:47 Spacer gone 38.8 bbls
				22:48 Batch up and scale first lead Cement to12.3 ppg. 22:52 Start down hole with Cement at 4.1 Bpm with 185 psi.
				22:54 Sample and scale cement at 12:35
				23:01 38 bbls first lead away at 12.5 ppg
				23:02 Start second lead at 12.5 ppg with 240 psi at 6 Bpm
				23:23 Sample and scale with 132 bbls away (12.4 ppg)
				23:59 350 bbls second lead away with 230 psi at 6 Bpm
ort Start Date	Report End Date	24hr Activity Summary		
6/2/2014	6/2/2014			w/ OBM. Clean pits w/ super sucker, cold cut 9 5/8" and set them in the slips. Skid rig over to the UT 14-9-4-3-2WH ar
		begin intermediate hole sec	tion.	

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### **Summary Rig Activity**

10	End Time	Comment
ne 00:00	End Time 04:00	Comment Continue Pumping Cement with Halliburton 00:21 start lead with 382 bbls away 00:22 start tail scale sample at 147.5 ppg 00:32 scale lead at 14.1 ppg with 90 bbls away with 395 psi at 5 Bpm 00:38 109 bbls of lead gone Wash up pump and prep for Disp Start sending mud to cement truck with premix pumps 00:54 drop plug verified by Zack Baldwin pumping displacement with 14.1 ppg Obm at 4 Bpm with 160 psi 10 bbls away at 4 Bpm with 160 psi Increase rate to 6 Bpm with 330 psi 20 bbls away at 7 Bpm with 330 psi 30 bbls away at 7 Bpm with 390 psi 30 bbls away at 7 Bpm with 450 psi 110 bbls away at 7 Bpm with 450 psi 110 bbls away at 7 Bpm with 450 psi 200 bbls away at 7 Bpm with 450 psi 200 bbls away at 7 Bpm with 440 psi Good returns 320 bbls away at 7 Bpm with 440 psi Good returns 370 bbls away at 7 Bpm with 450 psi Good returns 370 bbls away at 7 Bpm with 450 psi Good returns 550 bbls away at 7 Bpm with 450 psi Good returns 550 bbls away at 7 Bpm with 450 psi Good returns 550 bbls away at 7 Bpm with 450 psi Good returns 550 bbls away at 7 Bpm with 450 psi Started getting spacer back / good returns 550 bbls away at 5 Bpm with 271 psi 590 bbls away at 5 Bpm with 271 psi 590 bbls away at 5 Bpm with 270 psi Clean cement back 600 bbls away at 5 Bpm with 195 psi 610 bbls away at 5 Bpm with 195 psi 610 bbls away at 5 Bpm with 195 psi 610 bbls away at 5 Bpm with 195 psi 610 bbls away at 5 Bpm with 195 psi 610 bbls away at 5 Bpm with 195 psi 610 bbls away at 5 Bpm with 195 psi 610 bbls away at 5 Bpm with 195 psi 610 bbls away at 5 Bpm with 195 psi 610 bbls away at 5 Bpm with 195 psi 610 bbls away at 5 Bpm with 195 psi 610 bbls away at 5 Bpm with 195 psi 610 bbls away at 5 Bpm with 270 psi Clean cement back Floats held Wash up and rig down cement crew ************************************
04:00	End Time 14:30	(Start) Nipple up Well head equipment - Hold Pre job safety meeting with B&C and Cameron. Nipple down C and kill lines break well head connection at base of "B" section, Set slips with 80K overpull and Cut-off 9 5/8" casing with Safecut tool. Set BOP back down and install Pack off assembly (Run on Drill pipe) Break well heat top of "B" section and instal night cap.  ***Transfered WMB back intoActive pits from storage and configure Peak solids control for strip mode. Strip r weight back for drilling the UT14-9-4-9-2WH.
	tivity Summary Walk 15' back & Center Stack over hole. NU E	BOP's & Test BOP, Test Casing. Pick up Curve RSS BHA and trip in hole. Brought MW down from 15.5 to 15.2 ppg.

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#### **Summary Rig Activity**

Well Name: Ute Tribal 13-9-4-3-2WH

Start Time		End Time		Comment
Start Time	06:00	End Time	07:00	(Start) Skid - Walk 15' back & Center Stack over hole to Ute Tribal 13-9-4-3-2WH
Start Time	00.00	End Time	07.00	Comment
Ocare ruino	07:00	2.6 10	10:00	(Start) Rig Up - Set stack on wellhead and niple up BOP and choke lines with B&C quick test. RIgged up flow line to shaker skid, moved catwalk forward and pinned beaver slide, hooked up mud line, and stabbed mouse hole sock.
Start Time		End Time		Comment
	10:00		10:30	Safety Mtg. W/ Pioneer, B&C Testers & NFX, Testing BOP's
Start Time	10:30	End Time	16:00	Comment (Start) PresureTesting BOP's All tests - 250 psi low f/ 5 min, & 5000 psi high for 10 minutes. Tested Upper Pipe Rams, TIW Valve, Inside Manual Valve an inside Kill Line valve, upper pipes, manual BOP, and outside kill line, lower pipes, check valve, choke line, upright gauge valve, and inside manifold valves, tested Blind Rams and outside manifold valves and super choke tested Dart valve. Tested Annular to 3500 psi for 10 min. Test casing 1855 psi for 30 min. Test kelly hose & lines back to pumps.
Start Time		End Time		Comment
	16:00		16:30	(Start) Handle Curve Assembly - Install wear bushing
Start Time	16:30	End Time	20:00	Comment Pick up and begin to make up RSS curve assembly. Perform BHA checklist while making up BHA in mouse hole. Programmed directional tools and rigged up Downlink Commander
Start Time	20:00	End Time	20:30	Comment Rig Service - Perform Rig service and inspect top drive, blocks, ST-80, draw works. Performed thorough rig service prior to tripping in the hole.
Start Time	20:30	End Time	21:30	Comment (Start) Trip - Make up float sub and trip in the hole from 93' to 1,230'. Strapped pipe in the hole.
Start Time	21:30	End Time	22:00	Comment Install rotating head rubber
Start Time		End Time	22.00	Comment
	22:00		22:30	Shallow hole MWD test, tool tested good
Start Time	22:30	End Time	00:00	Comment Trip in the hole from 1,230' to 4,180', strapping pipe in the hole.
				MW reduced from 15.4 to 15.1 ppg. Mud is back on barite recovery after reduction in weight.
Report Start Date 7/7/2014	Report End Date 7/8/2014		ermediate casing float o	collar. Tag cement and drill out of casing shoe, perform FIT test. Drill 8 3/4" RSS curve. from 8430' to 8,748' 224' @ 22.4 fph
Start Time	00:00	End Time	01:00	Comment Trip in the hole from 4,180' to 5,504', strapping each stand.
Start Time	01:00	End Time	02:30	Comment Cut and slip 25 wraps of drill line
				MW 13.7, light mud from intermediate starting to mix with active system
Start Time		End Time		Comment
	02:30		03:00	Replace leaking rotating rubber
Start Time	03:00	End Time	06:00	Comment Trip in the hole from 5,504' to 8148' Wash from 8148' to 8377'
Start Time	06:00	End Time	07:00	Comment (Start) Drill Cement Float collar @ 8375' & Float shoe @ 8420' @ 450 gpm 100 rpm pp 2485 psi, wob 3-5 K
Start Time	07:00	End Time	07:30	Comment (Start) Drill Curve 10 ft New hole to 8430' @ 450 gpm 100 rpm pp 3100 psi wob 10-15 K

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#### **Summary Rig Activity**

art Time		End Time	Comment
	07:30	09:00	Circulate bottoms up 1 1/2 times 7500 stks. @ 450 gpm 20 rpm
t Time	09:00	End Time 10:00	Comment (Start) FIT Test: Perform FIT to 1,140 psi with 13.4 ppg MW at 8,430' (16.0 ppg equivalent)
art Time	10:00	End Time 13:30	Comment (STart) Drill 8 3/4" Curve with Weatherford RSS assembly From 8430' to 8524' 95' w/ 450 GPM, 125 RPM, PP 3450 psi, WOB 3-5 K
art Time	13:30	End Time 14:00	Comment Rig Service
tart Time	14:00	End Time 00:00	Comment Drill 8 3/4" Curve with Weatherford RSS assembly from 8524' to 8,748' Drill 224' @ 22.4 fph Parameters: 20-25k WOB, 115-125 rpm, Variable TQ 4000-13000, 120-143 spm (420-500 gpm) Start - MW 15.3, Vis 55 End - MW 15.5, VIs 56
Report Start Date 7/8/2014		Activity Summary	8 3/4" lateral from 9,209' to 9,391' Drill 643' @ 28 fph
Start Time	00:00	End Time 03:00	Comment   Drill 8 3/4" Curve with Weatherford RSS assembly   from 8,748' to 8,809' Drill 61' @ 20.33 fph   Parameters: 20-25k WOB, 115-125 rpm, Variable TQ 4000-13000, 120-143 spm (420-500 gpm)
			MW 14.5 Vis 55
Start Time	03:00	End Time 03:30	Comment Rig Service - Service and check fluids in top drive, draw works, ST-80, catwalk, and rotating head oiler.
tart Time	03:30	End Time 17:00	Comment Drill 8 3/4" Curve with Weatherford RSS assembly from 8,809' to 9,189' Drill 385' @ 28.1 fph Parameters: 20-25k WOB, 125-130 rpm, Variable TQ 4000-13000, 120-143 spm (420-500 gpm)  MW 14.5 Vis 55
Start Time	17:00	End Time	Comment Rig Service - Lubricate Topdrive, draw works, ST-80
Start Time	17:30	End Time 00:00	Comment (Start) Drill 8 3/4" Lateral with Weatherford RSS assembly from 9,189' to 9,391' (Land curve at 9,209') Drill 202' @ 31.1 fph Parameters: 20-25k WOB, 130-150 rpm, Variable TQ 4000-13000, 120-143 spm (420-500 gpm)
			MW 14.6 Vis 55
eport Start Date 7/9/2014		Activity Summary I 8 3/4" lateral from 9,391' to 10,119' Dril	·
tart Time	00:00	End Time 03:30	Comment Drill 8 3/4" Lateral with Weatherford RSS assembly from 9,391' to 9,473' Drill 82' @ 23.4 fph Parameters: 20-25k WOB, 135-145 rpm, 13,500 torque, 120-143 spm (420-498 gpm), 3,250 psi
			MW 14.6 Vis 55
Start Time	03:30	End Time 04:00	Comment Service rig, Check oils in top drive, drawworks, Grease crown, Clean radiators on light plants

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### **Summary Rig Activity**

Time	04:00	End Time 17:0	00	Comment Drill 8 3/4" Lateral with Weatherford RSS assembly Drill from 9,473' to 9,853' Drill 380' @ 29.2 fph Parameters: 24-29k WOB, 150-180 rpm, 11,500 torque, 143 spm (498 gpm), 3,440 psi
				Increased MW to 14.8 Vis 55
t Time	17:00	End Time	30	Comment Service rig, Check oils in top drive, drawworks, ST-80, Clean radiators on light plants
rt Time	17:30	End Time 00:0	00	Comment Drill 8 3/4" Lateral with Weatherford RSS assembly Drill from 9,853' to 10,119' Drill 266' @ 40.9 fph Parameters: 23-28k WOB, 160 rpm, 10,800 torque, 143 spm (498 gpm), 3,460 psi
				Maintain 14.8 MW, 55 Vis
7/10/2014		ctivity Summary 8 3/4" lateral from 10,119' to 11,146	6' Drill 1,027' @	
art Time	00:00	End Time 04:3	30	Comment Drill 8 3/4" Lateral with Weatherford RSS assembly Drill from 10,119' to 10,327' Drill 208' @ 46.2 fph Parameters: 23-28k WOB, 180 rpm, 13,200 torque, 143 spm (498 gpm), 3,630 psi
				Maintain 14.8 MW, 55 Vis
art Time	04:30	End Time 05:0	00	Comment Service rig, Check oils in top drives, Clean radiators on both light plants, Go through #2 mud pump, Grease swivel packing
rt Time	05:00	End Time 07:0	00	Comment Drill 8 3/4" Lateral with Weatherford RSS assembly Drill from 10,327' to 10,422' Drill 95' @ 47.5 fph Parameters: 23-28k WOB, 180 rpm, 13,200 torque, 143 spm (498 gpm), 3,630 psi
				Maintain 14.8 MW, 55 Vis
rt Time	07:00	End Time 07:3	30	Comment Rig Service
art Time	07:30	End Time 09:3	30	Comment IBOP broke out from Quill, remove Torque Ring, Re Torque IBOP, Reinstall Torque Ring.
art Time	09:30	End Time 00:0	00	Comment Drill 8 3/4" Lateral with Weatherford RSS assembly Drill from 10,422' to 11,146' Drill 724' @ 49.9 fph Parameters: 25-35k WOB, 180 rpm, 15,000 torque, 143 spm (498 gpm), 3,620 psi
				Increase MW to 14.9, 55 Vis
port Start Date 7/11/2014		ctivity Summary 8 3/4" lateral from 11,146' to 12,370	)' Drill 1,224' @	·
rt Time	00:00	End Time 04:0	00	Comment Drill 8 3/4" Lateral with Weatherford RSS assembly Drill from 11,146' to 11,370' Drill 224' @ 56 fph Parameters: 30-35k WOB, 180 rpm, 15,500 torque, 137 spm (478 gpm), 3,430 psi
				Maintain 14.9 MW, 55 Vis

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### **Summary Rig Activity**

ime		End Time	Comment
	04:00	04:30	Service rig, Check oils in top drive, drawworks, Grease swivel packing
ime		End Time	Comment
	04:30	13:30	Drill 8 3/4" Lateral with Weatherford RSS assembly
			Drill from 11,370' to 11,939' Drill 569' @ 63.2 fph
			Parameters: 30-35k WOB, 180 rpm, 16,000 torque, 134 spm (467 qpm), 3430 psi
			Increase MW to 15.1, 55 Vis
Time		End Time	Comment
	13:30	14:30	Change out rotating head rubber
Time		End Time	Comment
	14:30	17:30	Drill 8 3/4" Lateral with Weatherford RSS assembly
			Drill from 11,939' to 12,113' Drill 174' @ 58 fph
			Parameters: 30-35k WOB, 180 rpm, 16,000 torque, 134 spm (467 gpm), 3,560 psi
			Maintain 15.1 MW, 55 Vis
t Time		End Time	Comment
	17:30	18:00	Service rig, Check oils in drawworks, top drive
t Time		End Time	Comment
-	18:00	00:00	Drill 8 3/4" Lateral with Weatherford RSS assembly
	. 0.00		Drill from 12.113' to 12.370' Drill 257' @ 42.8 fph
			Parameters: 30-35k WOB, 180 rpm, 16,000 torque, 134 spm (467 gpm), 3,640 psi
			Increase MW to 15.2, 55 Vis
oort Start Date	I Danard Fard Data 104ha Aa	ti-it- C	illuease www.to-13.2, 33 vis
7/12/2014		tivity Summary 3/4" lateral from 12,370' to 13,268', Drill 898' @	) 40.9 fph
1/12/2014 t Time	7/13/2014  DIIII 6	End Time	IComment
n rime	00:00		
	00.00	03:30	Drill 8 3/4" Lateral with Weatherford RSS assembly
			Drill from 12,370' to 12,509' Drill 139' @ 39.7 fph
			Parameters: 31-36k WOB, 180 rpm, 16,620 torque, 134 spm (467 gpm), 3,590 psi
			Maintain 15.1 MW, 55 Vis
t Time		End Time	Comment
	03:30	04:00	Service rig, Check oils in top drive, drawworks, Clean radiators on light plants, Service #2 mud pump
rt Time		End Time	Comment
	04:00	11:00	Drill 8 3/4" Lateral with Weatherford RSS assembly
			Drill from 12,509' to 12,838' Drill 329' @ 47 fph
			Parameters: 31-36k WOB, 180 rpm, 16,900 torque, 134 spm (467 gpm), 3,640 psi
			Increase MW to 15.2, 55 Vis
		End Time	Comment
Time	44.00	11:30	Troubleshoot Mud Pumps
Time	11:00	End Time	Comment
	11:00		
			Drill 8 3/4" Lateral with Weatherford RSS assembly
	11:30	12:00	Drill 8 3/4" Lateral with Weatherford RSS assembly Drill from 12 838' to 12 850' Drill 12' @ 24 fpb
			Drill from 12,838' to 12,850' Drill 12' @ 24 fph
			Drill from 12,838' to 12,850' Drill 12' @ 24 fph Parameters: 20-25k WOB, 160 rpm, 16,000 torque, 120 spm (418 gpm), 3,180 psi
rt Time		12:00	Drill from 12,838' to 12,850' Drill 12' @ 24 fph Parameters: 20-25k WOB, 160 rpm, 16,000 torque, 120 spm (418 gpm), 3,180 psi  Maintain 15.1 MW, 55 Vis
rt Time rt Time rt Time			Drill from 12,838' to 12,850' Drill 12' @ 24 fph Parameters: 20-25k WOB, 160 rpm, 16,000 torque, 120 spm (418 gpm), 3,180 psi

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#### **Summary Rig Activity**

	End Time	Comment
12:30	13:30	Drill 8 3/4" Lateral with Weatherford RSS assembly Drill from 12,850' to 12,886' Drill 36' @ 36 fph Parameters: 31-36k WOB, 180 rpm, 16,900 torque, 134 spm (467 gpm), 3,640 psi
	End Time	Maintain 15.2 MW, 55 Vis
13:30	14:00	Service rig
14:00	End Time 00:00	Comment Drill 8 3/4" Lateral with Weatherford RSS assembly Drill from 12,886' to 13,268' Drill 382' @ 38.2 fph Parameters: 31-36k WOB, 180 rpm, 15,800 torque, 134 spm (467 gpm), 3,790 psi
		Maintain 15.2 MW, 55 Vis
		Clean Harbor's barite recovery centrifuge broke down at 19:30, rigged up remaining shaker for stripping operations as needed till new shaker arrives 7/13 AM
	ctivity Summary 8 3/4" lateral from 13,268' to 14,405', Drill 1,137'	© 50.5 fph
00:00	End Time 04:00	Comment Drill 8 3/4" Lateral with Weatherford RSS assembly Drill from 13,268' to 13,457' Drill 189' @ 47.3 fph Parameters: 31-36k WOB, 180 rpm, 16,100 torque, 134 spm (467 gpm), 3,870 psi
	End Time	Maintain 15.2 MW, 55 Vis
04:00	04:30	Service rig, Check oils in top drive, drawworks, Grease swivel packing, Clean light plant radiators
04:30	End Time 12:30	Comment Drill 8 3/4" Lateral with Weatherford RSS assembly Drill from 13,457' to 13,836' Drill 379' @ 47.4 fph Parameters: 34-39k WOB, 180 rpm, 20,200 torque, 134 spm (467 gpm), 3,920 psi
		Maintain 15.1 MW, 55 Vis
12:30	End Time 13:00	Comment Service Top Drive (Tighten wash pipe & Greese)
13:00	End Time 16:00	Comment Drill 8 3/4" Lateral with Weatherford RSS assembly Drill from 13,836' to 14,025' Drill 189' @ 63 fph Parameters: 35-40k WOB, 180 rpm, 19,200 torque, 134 spm (467 gpm), 40,600 psi
		Maintain 15.1 MW, 55 Vis
16:00	End Time 16:30	Comment Service rig, Inspect drawworks, top drive, blocks, crown, catwalk, IBOP
16:30	End Time 00:00	Comment Drill 8 3/4" Lateral with Weatherford RSS assembly Drill from 14,025' to 14,405', Drill 380' @ 50.7 fph Parameters: 34-39k WOB, 180 rpm, 20,300 torque, 134 spm (467 gpm), 4,140 psi
		, , , , , , , , , , , , , , , , , , , ,

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### **Summary Rig Activity**

art Time		End Time	Comment
	00:00	00:30	Service rig, Check oils in top drive, drawworks, Clean radiators on light plants, filters on top driver blower moto
t Time	00:30	End Time 05:30	Comment Drill 8 3/4" Lateral with Weatherford RSS assembly Drill from 14,405' to 14,645', Drill 240' @ 48 fph Parameters: 31-36k WOB, 180 rpm, 19,000 torque, 134 spm (467 gpm), 4,310 psi
			Maintain 15.1 MW, 55 Vis
Time	05:30	End Time 07:30	Comment Change out swivel packing in top drive
t Time	07:30	End Time 08:00	Comment Lay Down Bent Joint
rt Time	08:00	End Time 11:30	Comment Drill 8 3/4" Lateral with Weatherford RSS assembly Drill from 14,645' to 14,743', Drill 98' @ 28 fph Parameters: 30-35 k WOB, 180 rpm, 22,700 torque, 134 spm (467 gpm), 4,760 psi
			Maintain 15.1 MW, 80 Vis Pressure increased by 500 psi (4250 psi)
t Time	11:30	End Time 12:00	Comment Circulate cleanup Cycle & Work pipe, 180 RPM, 467 GPM
t Time	12:00	End Time 13:00	Comment Drill 8 3/4" Lateral with Weatherford RSS assembly Drill from 14,743' to 14,782', Drill 39' @ 39 fph Parameters: 31-36 k WOB, 180 rpm, 19,100 torque, 134 spm (467 gpm), 4,700 psi
			Maintain 15.1 MW, 80 Vis Pressure increased by 700 psi (4840 psi)
t Time	13:00	End Time 13:30	Comment Circulate cleanup Cycle & Work pipe, 180 RPM, 467 GPM
t Time	13:30	End Time 14:00	Comment Drill 8 3/4" Lateral with Weatherford RSS assembly Drill from 14,782' to 14,794', Drill 12' @ 24 fph Parameters: 33-38 k WOB, 180 rpm, 20,300 torque, 120 spm (418 gpm), 4,130 psi
			Maintain 15.1 MW, 80 Vis
t Time	14:00	End Time 16:00	Comment Circulate cleanup Cycle & Work pipe, 180 RPM, 467 GPM
t Time	16:00	End Time 17:30	Comment Drill 8 3/4" Lateral with Weatherford RSS assembly Drill from 14,794' to 14,847', Drill 53' @ 35.3 fph Parameters: 32-37 k WOB, 150 rpm, 22,800 torque, 134 spm (467 gpm), 4,560 psi
at Ties a		[ ]	Maintain 15.1 MW, 80 Vis
rt Time	17:30	End Time 18:00	Comment Service rig, Check oils in top drive, drawworks, light plants

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### **Summary Rig Activity**

Time	18:00	End Time	:00	Comment Drill 8 3/4" Lateral with Weatherford RSS assembly Drill from 14,847' to 15,141', Drill 294' @ 49 fph
				Parameters: 35-40 k WOB, 180 rpm, 23,500 torque, 134 spm (467 gpm), 4,120 psi  Maintain 15.1 MW, 80 Vis
I .		Activity Summary	51 D::   4 0041 @ .	
7/15/2014 Time	7/16/2014 Drill	8 3/4" lateral from 15,141' to 16,20: End Time	5', Drill 1,064' @ 4	48.4 TPT Comment
Time	00:00		:30	Drill 8 3/4" Lateral with Weatherford RSS assembly Drill from 15,141' to 15,353', Drill 212' @ 60.6 fph Parameters: 35-40 k WOB, 180 rpm, 20,300 torque, 134 spm (471 gpm), 4,240 psi
				Maintain 15.1 MW, 80 Vis
t Time	03:30	End Time 04:	:00	Comment Service rig, Check oils in top drive, drawworks, light plants, and ST-80
rt Time	04:00	End Time	:00	Comment Drill 8 3/4" Lateral with Weatherford RSS assembly Drill from 15,353' to 15,825', Drill 472' @ 52.4 fph Parameters: 25-30 k WOB, 180 rpm, 21,200 torque, 134 spm (471 gpm), 4,330 psi
· <del></del> -				Maintain 15.1 MW, 70 Vis
t Time	13:00	End Time	:30	Service rig, Check oils in top drive, drawworks, ST-80, catwalk, Inspect blocks and crown
t Time	13:30	End Time 19.	:30	Comment Drill 8 3/4" Lateral with Weatherford RSS assembly Drill from 15,825' to 16,060', Drill 235' @ 39.2 fph Parameters: 30-35 k WOB, 180 rpm, 20,400 torque, 133 spm (468 gpm), 4,400 psi
				Maintain 15.1 MW, 70 Vis
t Time	19:30	End Time	:30	Comment Change out wash pipe assembly
t Time	20:30	End Time 00:	:00	Comment Drill 8 3/4" Lateral with Weatherford RSS assembly Drill from 16,060' to 16,205', Drill 145' @ 41.4 fph Parameters: 25-30 k WOB, 160 rpm, 20,200 torque, 133 spm (468 gpm), 4,490 psi
				Maintain 15.1 MW, 70 Vis
ort Start Date R		Activity Summary	E' Drill 1 020' @	46.8 fph, 1 hr rig repairs - mud line leak
t Time	7/17/2014   DIIII	End Time	15, Dilli 1,030 @ 6	Comment   Comme
	00:00	00:	:30	Service rig, Check oils on top drive, drawworks, Inspect crown, blocks, and track guides
t Time	00:30	End Time	:00	Drilled 759' of 8 3/4" Lateral with Weatherford RSS assembly from 16,205' to 16,964' with an average ROP of 48.97 fph
				Parameters: 25-30 k WOB, 160 rpm, 22,500 torque, 134 spm (471 gpm), 4,440 psi  Maintain 15.1 MW, 70 Vis
rt Time		End Time	:30	Comment Service rig, Check oils on top drive, drawworks, ST-80, catwalk, Inspect blocks

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#### **Summary Rig Activity**

art Time		End Time	Comment
iit riine	16:30	23:00	Drilled 271' of 8 3/4" Lateral with Weatherford RSS assembly from 16,964' to 17,235' with an average ROP of 41.7 fph Parameters: 20-25 k WOB, 180 rpm, 22,500 torque, 134 spm (471 gpm), 4,510 psi
			Maintain 15.1 MW, 70 Vis
rt Time	23:00	End Time 00:00	Comment Observed 800 psi pressure loss, Picked up off bottom and found leak on mud line between mud pumps, Lock ou both pumps, Isolate #2 mud pump from mud line in order to make repairs to mud line
port Start Date 7/17/2014		ctivity Summary 3 3/4" lateral from 17,235' to 17,772', Drill 537	7' @ 25 fph, 1.5 hr rig repairs - mud line leak
art Time	00:00	End Time 00:30	Comment Cont. repairs to mud line
art Time	00:30	End Time 04:30	Comment Drilled 123' of 8 3/4" Lateral with Weatherford RSS assembly from 17,235' to 17,358' with an average ROP of 30.8 fph Parameters: 20-25 k WOB, 180 rpm, 20,300 torque, 119 spm (418 gpm), 3,880 psi
			Maintain 15.1 MW, 70 Vis
art Time	04:30	End Time 05:00	Comment Service rig, Change out swab on #1 mud pump
art Time	05:00	End Time 06:30	Comment Drilled 50' of 8 3/4" Lateral with Weatherford RSS assembly from 17,358' to 17,408' with an average ROP of 33. fph Parameters: 20-25 k WOB, 180 rpm, 20,300 torque, 119 spm (418 gpm), 3,940 psi
			Maintain 15.1 MW, 70 Vis
art Time	06:30	End Time 07:30	Comment Finish repairs to mud line, Lock out both mud pumps and plumb #2 back into mud line
rt Time	07:30	End Time 17:00	Comment Drilled 219' of 8 3/4" Lateral with Weatherford RSS assembly from17,408' to 17,627' with an average ROP of 23 fph Parameters: 20-25 k WOB, 165 rpm, 20,200 torque, 130 spm (457 gpm), 4,570 psi
			Maintain 15.1 MW, 70 Vis
ırt Time	17:00	End Time 17:30	Comment Service rig
rt Time	17:30	End Time 00:00	Comment Drilled 145' of 8 3/4" Lateral with Weatherford RSS assembly from17,627' to 17,772' with an average ROP of 22 fph Parameters: 20-25 k WOB, 160 rpm, 18,500 torque, 130 spm (457 gpm), 4,650 psi
			Maintain 15.1 MW, 70 Vis

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### **Summary Rig Activity**

Well Name: Ute Tribal 13-9-4-3-2WH

Comment Drilled 138' of 8 3/4" Lateral with Weatherford RSS assembly from17,722' to 17,910' with an average ROP of 25.1 fph Parameters: 25-30 k WOB, 160 rpm, 21,600 torque, 129 spm (453 gpm), 4,700 psi  Maintain 15.1 MW, 70 Vis  Comment Service rig, Check oils on top drive, catwalk, drawworks, ST-80, Inspect blocks and crown  Comment Drilled 190' of 8 3/4" Lateral with Weatherford RSS assembly from 17,910' to 18,100' with an average ROP 22.4 fph Parameters: 31-36 k WOB, 170 rpm, 20,400 torque, 130 spm (457 gpm), 4,620 psi  Maintain 15.1 MW, 70 Vis  Comment Lubricate rig and Top drive system, Perform JSA and personel lift worksheet then Lock out and tag out procedure then service all moving parts on TDS-10 and ST-80 as well as catwalk and draw works. Lubricate blocks and crown.  Comment Drilled 195' of 8 3/4" Lateral with Weatherford RSS assembly from 18,100' to 18,295' with an average ROP 21.7 fph Parameters: 25-30 k WOB, 160 rpm, 19,000 torque, 130 spm (457 gpm), 4,550 psi  Maintain 15.1 MW, 70 Vis  Comment Drilled 160' of 8 3/4" Lateral with Weatherford RSS assembly from 18,295' to 18,455' with an average ROP of 29.1 fph
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Parameters: 22-27 k WOB, 160 rpm, 20,500 torque, 130 spm (457 gpm), 4,440 psi
Maintain 15.1 MW, 70 Vis
Comment
Lubricate rig and Top drive system, Perform JSA and personel lift worksheet then Lock out and tag out procedur then service all moving parts on TDS-10 and ST-80 as well as catwalk and draw works. Lubricate blocks and crown.
Comment
Drilled 31' of 8 3/4" Lateral with Weatherford RSS assembly from 18,455' to 18,486' with an average ROP of 12.4 foh
Parameters: 25-30 k WOB, 170 rpm, 24,700 torque, 119 spm (418 gpm), 3,870 psi
Troubleshoot mud pumps and drill with only #2 pump at 120 Stk (Lock out, tag out #1 mud pump) Perform JSA
Maintain 15.1 MW, 70 Vis
Comment  Peoplese Swah in #1 Mud nump and function test. Then replaced Swah and liner and function test ( Leaking
Replace Swab in #1 Mud pump and function test, Then replaced Swab and liner and function test,( Leaking
around liner) Replace liner dasket and discover a washed out wear plate
around liner) Replace liner gasket and discover a washed out wear plate.
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## NEWFIELD

#### **Summary Rig Activity**

Well Name: Ute Tribal 13-9-4-3-2WH

art Time 11:30	End Time 00:	On Drilled 171' of 8 3/4" Lateral with Weatherford RSS assembly from 18,486' to 18,657' with an average ROP of 13.7 fph Parameters: 20-25 k WOB, 175 rpm, 18,700 torque, 120 spm (422 gpm), 3,630 psi  Continue to work on #1 mud pump, Perform JSA with Central Utah Welding and Fabrication, Took approx. 5 hrs
		to remove washed wear plate  Maintain 15.1 MW, 80 Vis
eport Start Date Report End Date	24hr Activity Summary	indiritant 10.1 livivi, 60 vio
7/20/2014 7/21/2014		5'. Drill 56' @ 10.2 fph
Start Time	End Time	Comment
00:00	01:	Drilled 14' of 8 3/4" Lateral with Weatherford RSS assembly from 18,657' to 18,671' with an average ROP of 14 fph Parameters: 20-25 k WOB, 175 rpm, 18,700 torque, 120 spm (422 gpm), 3,630 psi
		Farameters. 20-23 K WOB, 173 1pm, 18,700 torque, 120 spm (422 gpm), 3,030 psi
		Continue to work on #1 mud pump, Perform JSA with Central Utah Welding and Fabrication, Took approx. 5 hrs to remove washed wear plate
		Maintain 15.1 MW, 80 Vis
Start Time	End Time	Comment
01:00	01:	
Start Time	End Time	Comment
01:30	06:	fph
		Parameters: 20-25 k WOB, 175 rpm, 18,700 torque, 120 spm (422 gpm), 3,630 psi
		Continue to work on #1 mud pump until 03:00 then flow rate was increased to 490 GPM with 4600 psi but P-rate did not improve and RSS Not responding to commands Properly At 05:15 We lost #1 Swab on #1 Mud pump again. and Trouble shoot of RSS determined that the hydraulics have failed in RSS.
		Maintain 15.1 MW, 80 Vis
Start Time	End Time	Comment
06:00	O7:	

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#### **Summary Rig Activity**

Well Name: Ute Tribal 13-9-4-3-2WH

Start Time		End Time		Comment
	07:30		20:30	Circulate clean up cycle for trip.  Circulate with 2 Pumps at 490 GPM with 4740 PSI and Rotate at 160 RPM and reciprocate pipe from 18670 to 18575 for first bottoms up pressure dropped to 4605 PSI and torque dropped from 13600 to 12400 Ft/lbs  Pull stand and rotate and reciprocate from18575 to 18485, second bottoms up at 09:55 with Pressure dropped to 4500 Psi and torque at 11900 Ft/lbs
				Pulled second stand and reciprocate and rotate at 125 RPM from 18485 to 18390 while circulating at 490 GPM Pressure stayed at 4500 PSI with torque at 11500 ft/lbs.
				Pulled Third stand and Attempted to Pull on elevators with Max pull of 400K a 94' stand was successfully pulled on elevators with average pick up weight of 360K Continued circulating at 490 GPM while rotating at 125 Rpm and reciprocating from 18390 to 18395 torque at 11000 ft/lbs and pressure at 4450 PSI Pumped a 100 BBI wall-Nut sweep and spotted mid lateral then Stood back a stand at 18,288 then attempted a pull test with 2 Stands from 18,288 up to 18,100' with Max pull of 370K and Average pull of 325K
				Continue circulating at 490 GPM and rotating at 125 RPM and reciprocating from 18,100' to 18007' and prepare 200 BBL wall-nut sweep Pump Sweep and chase with 377 bbls to spot sweep in lateral annulas 1000' above the bit.
Start Time	20:30		00:00	Comment Trip - Pull out of hole with RSS assembly on elevators from 18,100' to 14,400', average pick up weight of 280 klbs, pulled 425 klbs on three stands at 17,780', 16,690', and 16440', Monitor well on trip tank
Report Start Date 7/21/2014			embly, Handle BHA, T	rip in hole with 8 1/2" bent motor assembly to 8,736'
Start Time	00:00		00:30	Comment Flow Check and Pump pill at 14,000
Start Time	00:30	End Time	04:00	Comment Trip out of hole from 14,000' to 8,500' Monitoring well on trip tank, Well took proper fill
Start Time	04:00	End Time	04:30	Comment Service Rig and top drive
Start Time	04:30	End Time	08:00	Comment Trip out of hole from 8500' to the BHA at 105' Monitoring well on trip tank, Well took proper fill Pull rotating head rubber
Start Time	08:00	End Time	13:00	Comment Hold safety meeting with Weatherford, Break bit, lay down RSS, Lay down HEL Tool, reamer, Float sub and NMDC. Clean rig floor and grade bit 2-2 with 3 plugged nozzles and it was in gauge.  *Found a 1 1/2" hole washed in HEL/IDS tool at 4 1/2" IF connection between Pulsar collar and IDS collar
Start Time	08:00		13:00	Comment Hold safety meeting with Weatherford, Break bit, lay down RSS, Lay down HEL Tool, reamer, Float sub and NMDC. Clean rig floor and grade bit 2-2 with 3 plugged nozzles and it was in gauge.
Start Time  Start Time	08:00		13:00	Comment Hold safety meeting with Weatherford, Break bit, lay down RSS, Lay down HEL Tool, reamer, Float sub and NMDC. Clean rig floor and grade bit 2-2 with 3 plugged nozzles and it was in gauge.  *Found a 1 1/2" hole washed in HEL/IDS tool at 4 1/2" IF connection between Pulsar collar and IDS collar  Pick up and set adjustable mud motor at 1.5 deg, lay down Mud motor and pick up BHA from top to bottom then change out reamer sleeve for Slick sleeve on HEL tool. Pick up mud motor (7/8, 3.5 Stage .26 rev/gal) and make

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### **Summary Rig Activity**

Well Name: Ute Tribal 13-9-4-3-2WH

Гime		End Time	Comment
	15:00	17:00	Cut and Slip 150' of Drilling line
			Perform JSA, LOTO and Personel lift permit.
Time		End Time	Comment
11110	17:00	17:30	Service ria
-	17.00		3
Time	47.00	End Time	Comment
	17:30	21:30	Trip in hole from 1,037' to 5,112', Pick up agitator on top of Stand #53, Trip in hole from 5,112' to 5,611', Test
			MWD tool at 5,611', Trip in hole from 5,611' to 8,328'
Гime		End Time	Comment
	21:30	22:30	Change out - Install new rotating head element
ime		End Time	Comment
	22:30	23:00	Trip in hole from 8,328' to 8,736'
ime	22.00	End Time	Comment
ime	00.00		
	23:00	00:00	Circulate bottoms up, Pump at 120 spm (422 gpm), 3,100 psi, Rotate at 40 rpm, 4,400 ft lbs torque, 615 units
			max trip gas with 15.1 MW
Start Date	Report End Date 2	4hr Activity Summary	·
//22/2014	7/23/2014 T	rip in hole on elevators with 8 1/2" bent motor asse	embly from 8,736' to 17,522', 17,550 to 18,110', 18,125' to 18,691', Wash/ream from 17,522' to 17,550', 18,110' to 18,125
			8.976, Drill 263' @ 19.5 fph, 1 hr repairs - wash pipe/swivel packing
ime I	<u> </u>	End Time	Comment   Comm
iiie	00-00		
	00:00	05:30	Trip in hole from 8,736' to 17,522', Monitor well on trip tank, Fill pipe every 30 stands, Wash/ream bottom of o
			stand from 17,522' to 17,552', High side bent motor
			Pick up at 17,522' = 280 klbs, Slack off = 95 klbs, SPP at 120 spm (422 gpm) = 4470 psi, Torque at 40 rpm =
			15,000 ft lbs
ime		End Time	Comment
iiie	05:30	06:00	Service rig
	05.30		
ime		End Time	Comment
	06:00	09:00	Trip - High side Mud motor and trip in hole from 17,522 to 18,691, (Install drill pipe screen and screw into eac
			stand incase wash and ream is needed)
			Wash through tight spot from 18,105 to 18,123'
			Break circulation at 18,690' then wash and ream from 18,691 to bottom at 18,713'
ime		End Time	Comment
IIIIe	00.00		
	09:00	16:00	(START) Drilling Lateral with Directional assembly - Drill 102' of 8 1/2" hole in lateral from 18,713' to 18815' a
			average ROP of 20.4 FPH
ime		End Time	Comment
	16:00	17:00	Repairs to wash pipe, Replace swivel packing
ime		End Time	Comment
	17:00	17:30	Service rig, Check oils in top drive, drawworks, Grease crown
ime	17.00	End Time	Comment
iiie	17:20		
	17:30	00:00	(START) Drilling Lateral with Directional assembly - Drill 142' of 8 1/2" hole in lateral from 18,834' to 18,976'
			average ROP of 21.8 FPH
Start Date	Report End Date 2	4hr Activity Summary	
/23/2014	7/24/2014  C	Orill 8 1/2" lateral from 18,976' to 19,310' (td), Begin	clean up circulation cycles, pump clean up cycles 1-5, tripped 1 stand after each cycle. Pull tested string after clean up of
		5, broke over at 322K lbs, avg 328K lbs.	
me	<u>l "</u>	I End Time	Comment
	00:00	01:00	
	00:00	01:00	Circulate and reciprocate drill pipe to attempt to clean up hole. Pumped enough volume to clear the lateral wh
			pipe was being worked up and down. Started trickeling in walnut hull at a bag every 1/2 hour. Torque came of
			during the circulation from 20K ft/lb to 15K ft/lb.
ime		End Time	Comment
	04.00		Drilling Lateral with Directional assembly - Drill 95 of 8 1/2" hole in lateral from 18,976' to 19,071' at an average
	()1'()()	1 (15:00)	
	01:00	05:00	ROP of 23.8 FPH

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### **Summary Rig Activity**

Start Time		End Time	I Comment
	05:00	05:30	Rig Service. Inspect topdrive, drawworks, ST-80, and swivel packing.
Start Time	05:30	End Time 13:00	Comment Drilling Lateral with Directional assembly - Drill 189 of 8 1/2" hole in lateral from 19,071' to 19,260' at an average ROP of 25.2 FPH
Start Time	13:00	End Time	Comment Rig Service. Inspect topdrive, drawworks, ST-80, and swivel packing.
Start Time	13:30	End Time 15:00	Comment Drilling Lateral with Directional assembly - Drill 50 of 8 1/2" hole in lateral from 19,260' to 19,310' at an average ROP of 33.3 FPH
Start Time	15:00	End Time 00:00	Comment (Start) Final Clean Up Cycle - Clean Up Cycles - Reciprocating pipe 54', 70 RPM, and 120 SPM.  Pumped clean up cycles 1 - 5, after clean up cycle #5 we pull tested string with no rotation or pump rate.  Pull Weight broke over at 322 K lbs, max pull 337 K lbs, and we avg around 328 K lbs while pulling stand.
Report Start Date 7/24/2014	7/25/2014	<sup>24hr</sup> Activity Summary Pump clean up cycles 6-8 pulling a stand after e 19310' 14,400'.	each, tripped back to bottom and pumped final clean up cycle. Spot 5lb/bbl LubraBeads in lateral. Tripped out on elevators from
Start Time	00:00	End Time 04:00	Comment Circulate clean up cycles at 70 -RPM, and 120 SPM. Pumped clean up cycles 6-7, after clean up cycle #6 we pull tested string with no rotation or pump rate. Pumped 100 bbl nut plug sweep @ 5lb/bbl concentration. Pull Weight broke over at 299 K lbs, max pull 322 K lbs, and we avg around 308 K lbs while pulling stand. Average weight reduced by approximately 20K lb. After cycle #7 pull tested with no sweep, average pull was 311K lb.
Start Time	04:00	End Time 04:30	Comment Lubricate Rig - Lubricate top drive, swivel, draw works, and ST-80.
Start Time	04:30	End Time 06:00	Comment Continue with clean up cycle. Pump Bottoms up #8, stop and pull test (302K P/U) at 18,680' before running DP back to bottom for final clean up cycle.
Start Time	06:00	End Time 08:00	Comment Wash back to bottom from 18,783' to 19,310'
Start Time	08:00	End Time 11:30	Comment Circulate and reciprocate while rotting DP at 70 RPM for Final clean up cycle, Mix up and prepare Lubra-beads Pill and spot with pump #2 at 120 SPM Spot across lateral (Pump 550 bbls of 5 ppb LubraBeads & chase with 373 bbls mud)
Start Time	11:30	End Time 16:30	Comment (Start) Trip - Pull out of hole on elevators from 19,310' to 17,005' with no tight hole, tripped wet. Pumped slug, filled hole and monitor proper Drill pipe displacement with Trip tank. Trip out of the hole from 17,005' to 15,010 racking back.
Start Time	16:30	End Time 17:30	Comment Start laying down drillpipe at 15,010'. Laid down DP from 15,010 to 14,400'.
Start Time	17:30	End Time 18:00	Comment Lubricate rig - Service top drive and drawworks
Start Time	18:00	End Time 23:00	Comment Continue laying down drill pipe from 14,400' to 10,248'. Breaking out tight connections with tongs. Pulled max of 127K ft/lbs on tight connections, ended up bending 7 jnts up DP. Pioneer superintendent noted that we were exceeding max torque on tongs, tongs were rated for 65K ft/lbs. Located 100K ft/lbs on Pioneer 44 and called Kimzey Casing for their break out tongs. Began standing back stands with connections that wouldn't break out with ST-80. Decided to try Kimzey break out tongs that showed up on location about the same time as Double D HT-100s tongs from Pioneer 44.

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#### **Summary Rig Activity**

	15 17	
Start Time 23:00	End Time 23:30	Comment Had safety meeting w/ Kimzey and Pioneer to discuss the process and procedures to rigging up very large break out tongs.
Start Time 23:30	End Time 00:00	Comment Start rigging up Kimzey's break out tongs. Had to respot power unit behind rig on matting boards to avoid forklift and to have enough hose to reach floor. Lay down line was used with forklift to pickup and spot 5K lb break out tongs.
Report Start Date		convential motor assembly, bit graded at an 1-1 with 2 plugged nozzles. Ran pipe in derrick back in the hole (4,100' of drill before tripping out of the hole and laying down drill pipe. Trip out of the hole to 4,000'.
Start Time 00:00	End Time 02:30	Comment Finish rigging up Kimzey's break out tongs. Once tongs were rigged we tried to break out a connection that the ST-80 was not able to break out, Kimzey's tool maxed out at 78K ft/lbs of torque and didn't break out pipe. Rigged Kimzey down.
		Rigged up HT-100 tongs that were sent over from Pioneer 44
Start Time 02:30	End Time 07:30	Comment (Start) Trip - Lay down drill pipe from 10,248' to 6747' (Connections Breaking out at an avg of 65k ft/lbs with torques as high 95K)
Start Time 07:30	End Time 08:00	Comment Lubricate rig - Service top drive and draw works
Start Time 08:00	End Time 14:30	Comment Lay down drip pipe from 6747' to 5168' Run in 5 stands out of derrick with Tight connections and Break them Down while string weight is still 100K+ Continue Lay down Drill Pipe from 5158 to 1132' (Connections Breaking out at an avg of 65k ft/lbs with torques as high 95K)
Start Time 14:30	End Time 15:00	Comment Pull Rotating head insert and stand back one stand drill pipe
Start Time 15:00	End Time 15:30	Comment Service and check oils in top drive, draw works,
Start Time 15:30	End Time 16:30	Comment (Stop) Rig down HT-100 tongs and rig up BB-65 tongs. Sent HT-100 tongs to Pioneer 44
Start Time 16:30	End Time 17:00	Comment (Start) Trip - Trip out of the hole from 1,038' to 90'.
Start Time 17:00	End Time 19:00	Comment (Start) Handle BHA Lay down conventional mud motor 8 1/2" BHA. Load tools onto trucks to be shipped back to Houston and Weatherford's shop.
Start Time 19:00	End Time 21:30	Comment (Start) Trip - Run in the hole with 43 stands of drill pipe that was racked back in the derrick. 4,100' was ran back in the hole so we could lay down drill pipe.
Start Time 21:30	End Time 23:00	Comment (Start) Slip and Cut Drill Line - Cut and slip 120' of drill line. Recalibrate rig and rigged back up the HT-100 that were borrowed from Pioneer 44.
Start Time 23:00	End Time 00:00	Comment (Start) Trip - Lay down drill pipe from 4,100 to 4,000'.
Report Start Date Report End Date 7/26/2014 7/27/2014		wear bushing. Rig up Kimzey Casing Service and hold JSA discussing communication, pace, working in the heat, and stop Deep Well representative on location observing make up.
Start Time 00:00	End Time 04:30	Comment Lay down drill pipe from 4,000' to 600'. Connections breaking at average of 65K ft/lbs. Max break was 95K ft/lbs, 2-4 joints.

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#### **Summary Rig Activity**

0.4.00	End Time	05.00	Comment
04:30		05:00	Rig Service - Service Top Drive, Draw works, ST-80.
05.00	End Time	00.00	Comment Work and COOL of delitation Work floor for Kingson de provincia
05:00		06:00	Lay down last 600' of drill pipe. Wash floor for Kimzey's crews.
00.00	End Time	00.00	Comment
06:00		06:30	Lubricate rig - Service top drive and drawwork
			Flow Check No Flow
	End Time		Comment
06:30		07:00	Pull wear Bushing
	End Time		Comment
07:00		10:30	(Start) Casing Operations - Hold PJSM with rig crew and casing crew Prior to Rigging up casing Tools.
			Rig up casing tools Continue to monitor For flow
	End Time		Comment
10:30		17:30	Make up shoe, float, landing collar, and RSI sleeve. Tested float with CRT tool after making up the landing collar.
			Tested good. Ran on collar clamp until joint 15. Run 5 1/2" production casing to 4059', joint 3-15 got 5 1/2" x 8
			1/2" centralizers, ran 1 centralizer per joint. Filling pipe every 40 joints, pumping at 45-50 stk/min.
	End Time		Comment
17:30		18:00	Lubricate Rig - Service and check oils in top drive draw works, grease catwalk.
<del></del>	End Time		Comment
18:00		18:30	Pre Job safety meeting with Kimzey casing and new Pioneer rig crew. Talked about good communication during
			handover, swapping out when getting tired, and continued to talk about working in the heat.
	End Time		Comment
18:30	Liid Tiille	00.00	Run 5 1/2" production casing from 4059' to 7,100' w/ 1 centralizer per joint. Stopping to fill every 40 ints, pumping
10.30		00.00	at 45 stk/min and 560 psi on fills. Flow checks were showing no flow.
I Donort End Data 124h	Activity Summany		at 45 statillit and 500 psi of files. How cheeks were showing no now.
		a Sarvica from 7 100' t	to 10 205! Stage in GSI coment head and HES equipment
1/20/2014   Rui		g Service Holli 7,100 t	10 19,500 . Stage in 1931 centent head and FIES equipment.    Comment   Comm
00.00	End Time	01:20	Run 5 1/2" production casing from 7,100' to 8,427'.
	Fad Time	01.30	Comment   Comm
01:30	End Time	03:00	Circulate all remaining air out of the pipe and to surface. Pumped from surface a complete cycle at the
01.30		03.00	intermediate shoe. Pumped at 60 stk/min (5 bpm equivalent) at750 psi. RSI sleeve max pressure was 7341 psi.
			Saw 320 units of gas on bottoms up.
	End Time		Comment
03:00		03:30	Lubricate Rig - Lubricate draw works and top drive.
	End Time		Comment
03:30		06:00	Run 5 1/2" casing from 8,427 to 10246'.
	End Time		Comment
06:00		17:30	Continue running casing, Fill Pipe at 10246 and the day light rig crew held a Prejob safety meeting with KCS and
			reveiwed JSA.
			Continue running casing from 10,246 to 18,026' Filling pipe and Breaking circ every 40 Joints.
			Begin Cleaning Mud tanks with Red Messa Oil field Services Supervac and Pig truck
	End Time		Comment
17:30		18:00	Lubricate Rig - Rig service/ service and check oils in top drive and draw works.
	End Time		Comment
18:00		18:30	Held JSA with Kimzey Casing Service, Pioneer was switching out crews to morning tower so we had a discusion
	17:30  18:00  18:30  Report End Date 7/28/2014 Rul  00:00  01:30  03:00  03:30  06:00	End Time	Description

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#### **Summary Rig Activity**

Ct a at Time a		I Food Time	I Command
Start Time	18:30	End Time 23:30	Comment Continue running casing, fill pipe at 18,625'. Ran casing to bottom with out having to rotate. Casing on bottom at 21:00.
			21:45 landed casing at 19,305', used Kimzey Casing Service tongs to make up landing joint. Rig down Kimzey Casing Service and rigged up GSI cementing head to circulate while rigging up cementers.
Start Time	23:30	End Time 00:00	Comment Circulate on hole while rotating casing, bottoms up at 10,600 stks. Pumping at 60 spm (5 bpm), 950 psi, and 15 rpm. Stage out HES equipment.
Report Start Date 7/28/2014	Report End Date 24hr Activity 7/29/2014 Rig up Ha		with casing at 4 bpm while rotating at 15 gpm
Start Time	00:00	End Time 00:30	Comment Lubricate Rig - Rig service/ service and check oils in top drive and draw works.
Start Time	00:30	End Time 03:30	Comment Circulate Bottoms up with 4 BPM at 650 PSI while rotating at 15 RPM
Start Time	03:30	End Time 04:00	Comment (START) Cementing Operations - PJSM with Halliburton and rig crew Reveiwed JSA and discussed SWA and reinforced Team work.  Continue vite 4 RPM at 650 RSI
0			Continue circulating with 4 BPM at 650 PSI
Start Time	04:00	End Time 04:30	Comment Hook up Halliburton Iron to Cement head. (stopped circulation with rig pumps) Prime up Both cement trucks and Pressuretest to 500 PSI Low and 8000 PSI high
Start Time	04:30	End Time 09:30	Cement Well with Halliburton using a one blend System Job details:  Tuned spacer: 40 bbl without beads at15.4 ppg Turgo-vis spacer: 346 bbl without beads at15.4 ppg Primary cement: 548 bbl at 15.7 ppg Disp: 425 bbls Proposed pressure to land: 3500 psi Max surface pressure at plug down: 6784 psi 04:44 Begin pumping Tuned spacer at 4 Bpm with 1270 psi at 15.4 down hole reading 14.8 ppg 04:56 41.6 bbls tuned spacer gone begin batching up Turgo- vis Drop bottom plug 05:11 begin pumping Turgo-vis at 3 Bpm with 1100 psi at 14.8 ppg Reduced rate to 2.4 Bpm to maintain weight at 15.6 ppg with 1000 psi 05:20 catch sample with 25 bbls away and weigh out at 15.4 ppg calibrate down hole density 06:15 195 bbls Turgo-vis pumped increased rate to 4 Bpm with 915 psi at 15.4 ppg 07:00 375 bbls Turgo-vis pumped start primary cement at 15.9 ppg pumping 4 Bpm with 500 psi cement pumps aired up, boost pumps and slow rate then shut down B side pump, caught pressure with stage counter showing 22 bbls away 07:08 pumping primary cement at 15.7 ppg with 1060 psi at 4 Bpm Scale cement sample at 15.7 ppg 07:20 Rotary torque increasing 07:48 increased rate to 4 Bpm with 1230 psi at 15.6 ppg rotary torque leveled out at 10 to 11k 08:20 Increase max rotary torque to 17k torque is bouncing as high as 12,600 ft/lbs 08:53 with 500 bbls of cement pumped the pressure is 1700 psi at 5 Bpm. 09:10 we are assuming our stage total of 566 bbls is off so we calculated total volume off stage mix water total and calculated that 526 bbls of 548 had been pumped so we cycled through all the bins again to get another 16 bbls 09:32 stop pumping cement with 542 bbls total / stop rotation and prepare to drop second plug 09:33 Begin washing up pump and lines

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### **Summary Rig Activity**

rt Time	ĮE	nd Time	Comment
	9:30	11:30	Continue Cement, Begin Displacement 09:40 Drop second plug start pumping displacement at 5 Bpm
			10 bbls away at 5 Bpm with 1267 psi 40 bbls away shut down and asses leak on rotating cement head
			09:58 Start pumping again at 5 Bpm and rotate with 18k torque leak continues. (GSI rep recommends to contin pumping with top seal leaking)
			110 bbls away at 5 Bpm with 3000 psi /Good returns 160 bbls away at 5 Bpm with 3700 psi 18.6k torque 180 bbls away at 5 Bpm with 4200 psi 200 bbls away ( final weight at landing point) at 5 Bpm with 4500 psi Set safety kicks at 6200 psi Good returns 210 bbls away 5 Bpm with 4500 psi 250 bbls away at 5 Bpm with 4500 Torque at 19k Good returns 280 bbls away at 5 Bpm with 4700 psi Torque at 19,800 300 bbls away at 5 Bpm with 4800 350 bbls away at 5 Bpm with 4900 *377 bbls away at 5 Bpm with 4900 *377 bbls away at 5 Bpm with 5000 psi Reduce rate to 1.5 BPM (trouble getting Disp water to truck) 410 bbls away at 4 Bpm with 4650 psi torque is at 19000  *11:17 plug down with 418 bbls away Bumped Plug with 700 psi over FCP of 4750 psi Held for 3 minutes pressure stayed at 5450 bleed off and got 7.5 bbls back, floats held
			Total Returns 46 bbls of tuned spacer and Turgo-vis back at Surface
t Time	E	nd Time	Comment
	1:30	14:30	Wash Up and Rig Down Halliburton, Flush out BOP and Flowline, Rig Down GSI Cement Head
	4:30	nd Time 16:00	Comment (Start) NU Well Head Equipment - Hold PJSM with Cameron Crew and rig Crew, break out Landing Joint and Run Pack off.
	6:00	ind Time 17:00	Comment (Stop) Safety Stand Down - Driller recieved a H2S alarm indicating that there was H2S present in the subtructure. The evacuation alarm was sounded and all personnel on location gathered at the secondary muster point. All personnel were accounted upond arrival at the mustrer point. Drilling foreman and Pioneer tool pusher swept the rig w/ SCBAs on and found no sign of H2S or any down individuals. Once the area was deamed safe to renter personnel went back to work on the buddy system with H2S monitors. The source of gas was determined to be pressure washing the sub and getting a sensor wet.
art Time 17	7:00	nd Time 18:00	Comment (Start) ND BOP - Laydown mouse hole, nipple down rotating head, and remove head from annular. Nipple down BOP and realease the rig 18:00 on the UT 13-9-4-3-2WH. Will move to the Lucy 3-15-22-3-2WH.